

Duecanali DSP+D Series

2-Channel High-Performance Amplifier Platform with DSP and Dante™



- Touring
- Installation

2 lo-Z
hi-Z
channels



DSP
onboard



Armonía
Pro Audio Suite™



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 Armonía Pro Audio Suite™ software.

Powersoft's legendary efficiency saves valuable energy, keeping both operational cost and carbon footprint at a minimum: the Duecanali DSP+D Series shines with outstandingly low

power consumption and heat dissipation, with direct positive effects on investment – not to mention the benefits for the environment and 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 2Ω) 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



Duecanali DSP+D Series

2-Channel High-Performance Amplifier Platform with DSP and Dante™

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 LivImpedance™ measurement

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		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	Armonia Pro Audio Suite™

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

