Duecanali 1604 DSP+D

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

☐ Touring
☑ Installation

2 lo-Z hi-Z channels

SRM

PFC

DSP onboard

channel routing

Armonía Pro Audio Suite™

Dante™

Excellent sound quality and ample output power result from Powersoft's unique approach to Class D amplification, making the Duecanali 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 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 1604 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 1604 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 1604 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

Data are subject to change without notice
© 2017 Powersoft | All right reserved
DO000218.00_powersoft_Duecanali_1604_DSP_Series_DS

Powersoft AUDIO

Duecanali 1604 DSP+D

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 5/8-STF1-7,62
Number of input channels		
Analog	2	Phoenix MC 1,5/12-ST-3,81
Dante™*	2	1 x RJ45

Audio				
Gain	26 dB	29 dB	32 dB	35 dB
Input sensitivity @ 8 Ω	4.0 V	2.84 V	2.0 V	1.42 V
Max input level	20 dBu			
Frequency Response (±0.5 dB , 1 W @ 8 Ω)	20 Hz - 20 kHz			
Crosstalk (1 kHz)	typical -70 dB			
S/N (20 Hz - 20 kHz A-Weighted @ 8 Ω)	> 109 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 (input filter bypassed @ 8 Ω)	> 50 V/µs			
Damping Factor @ 8 Ω, 20 Hz - 100 Hz	> 500			

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), 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™ and LiveImpedance™ measurement

Output Stage	
Maximum output power per channel @ 8 Ω	800 W
Maximum output power per channel @ 4 Ω	800 W
Maximum output power per channel @ 2 Ω	1000 W
Maximum output power @ 4 Ω Bridged	2000 W
Maximum output power @ 8 Ω Bridged	1600 W
Maximum output power @ Hi-Z distributed line 100 V	800 W
Maximum output power @ Hi-Z distributed line 70 V	800 W
Maximum unclipped output voltage @ 8 Ω	115 V_{peak}
Maximum output current	45 A_{peak}

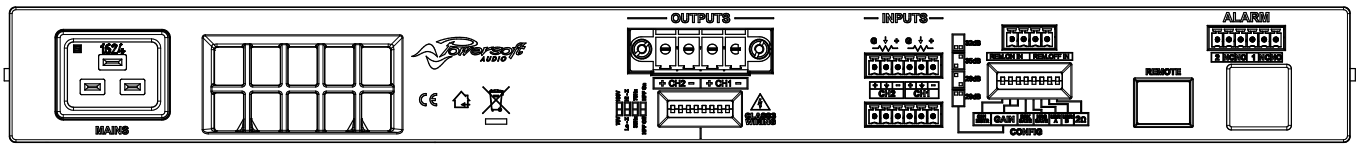
The power figure is calculated by driving and loading symmetrically all the channels: uneven loads allow to achieve higher performances.

AC Mains Power				
Power supply	Universal input, regulated output, PFC, overvoltage tolerant, SRM			
Nominal voltage (±10%)	100-240 V @ 50-60Hz			
Power factor (> 500 W ouput)	> 0.95			
Consumption/current draw	@ 115 V		@ 230 V	
Idle	25 W	0.45 A	25.9 W	0.29 A
1/8 Max Output Power @ 4 Ω	258.4 W	2.7 A	285.3 W	1.78 A
1/4 Max Output Power @ 4 Ω	554.4 W	5.24 A	549.2 W	2.84 A
AC Mains connector	IEC C20 inlet (20 A max) region-specific power cord provided			

Thermal				
Cooling	Low noise fan, continuously variable speed, temperature controlled, front to rear airflow			
Thermal dissipation	@ 115 V		@ 230 V	
Idle	85.4 BTU/h	21.53 kcal/h	88.4 BTU/h	22.3 kcal/h
1/8 Max Output Power @ 4 Ω	291.6 BTU/h	73.5 kcal/h	291.2 BTU/h	73.4 kcal/h
1/4 Max Output Power @ 4 Ω	527.1 BTU/h	132.9 kcal/h	509.4 BTU/h	128.4 kcal/h

Networking	
Standards compliance	auto-sensing Fast Ethernet (IEEE 802.3u, 100 Mbit/s)
Supported topologies	Star
Remote interface	Armonía Pro Audio Suite™

Construction	
Dimensions	483 x 44.5 x 358 mm 19.0 x 1.75 x 14.1 in
Weight	7 Kg (15.4 lb)



Powersoft S.p.A.
Via Enrico Conti, 5 - 50018 Scandicci (FI) Italy
Tel: +39 055 735 0230 - Fax: +39 055 735 6235
www.powersoft-audio.com