Ottocanali 1204 DSP+ETH

Powersoft

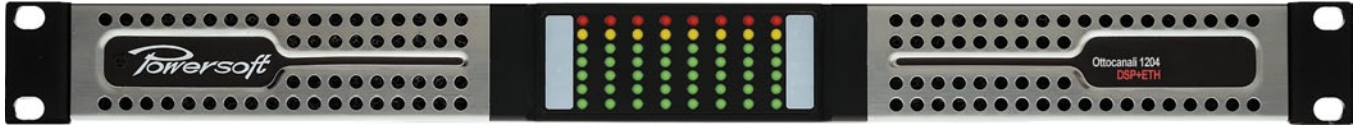## 8-Channel Power Amplifier with DSP and Ethernet for Lo-Z & Hi-Z Installations

☐ Touring
☑ Installation

8 lo-Z hi-Z channels

DSP on board · 1U

Applications

▶ Multi-zone venues, incl. smaller rooms in large scale installations
▶ Emergency systems (IEC 60849)
▶ Themed entertainment, amusement parks, shopping malls
▶ Cruise ships
▶ AV systems, board rooms
▶ Houses of worship
▶ Theaters, auditoriums
▶ Conference & learning centers
▶ Hotels, restaurants, bars

Ultimately flexible and safe, with a wide range of system control and monitoring capabilities as well as sound shaping options, and a total of up to 1,200 W output power over 8 amplifier channels for lo-Z or distributed line systems, all neatly packed into a single rack unit. As 'stand-alone' in corporate board rooms, or along with Powersoft Duecanali models in the largest setups, the **Ottocanali 1204 DSP+ETH** fits any venue.

Powersoft's legendary efficiency saves space and - more importantly - valuable energy, keeping both operational cost and 'carbon footprint' at a minimum. Ancillary technologies, such as the integrated DSP platform and the super-compact BatFormers®[1], both developed specifically for the **Ottocanali 1204 DSP+ETH**, add immense practical value during system design, installation and use, resulting in substantial savings at any level.

Compliant with IEC 60849, and on par with the Duecanali Series, the **Ottocanali 1204 DSP+ETH** matches the stringent requirements for sound systems for emergency purposes.

The **Ottocanali 1204 DSP+ETH** is unprecedented in combining efficiency, performance and adaptability.

1) BatFormers are optional, and can be retrofitted anytime.

Specifications

8-channel mode				mono-bridged mode	
4 Ω / Ch	8 Ω / Ch	70 V[1]	100 V[1]	8 Ω / Ch pair	16 Ω / Ch pair
150 W	80 W	125 W	130 W	300 W	150 W

1) With BatFormer® inserted per channel.　　　　　　EIAJ Test Standard, 1 kHz, 1% THD

✓ Legendary Powersoft efficiency:
  ▶ Green Audio Power®: minimal 'carbon footprint' and operational cost of electricity (Energy Star qualification pending); additional 'Energy Save' function
  ▶ Compact and space saving: 1 RU, and standard depth 360 mm / 14.2''

✓ Driving low impedance and distributed line[1] systems:
  ▶ Through a dedicated lid, optional BatFormers® can be plugged anytime into any channel to enable 70V or 100V outputs including galvanic isolation; mixed lo-Z/hi-Z systems possible
  ▶ BatFormers are highly efficient: only 1/3 of the size of a regular comparable transformer, yet delivering outstanding audio performance
  ▶ Up to 55 different output configurations possible

✓ Ready for voice evacuation systems in compliance with IEC 60849:
  ▶ Auxiliary signal inputs, enabled remotely or locally
  ▶ I/O signal integrity monitoring for lo-Z/hi-Z
  ▶ Fault alarm relay output

✓ Top-grade DSP on board:
  ▶ Dual 24-bit A/D & D/A with high dynamic range and 1 ms fixed latency; separate input/output EQ's with numerous filters of various types up to 48 dB/oct; peak, RMS, and frequency dependent limiters, time alignment
  ▶ Comprehensive system/load monitoring

✓ Direct PC/network connection:
  ▶ Ethernet interface for system setup, monitoring and control
  ▶ Fully manageable via Armonía Pro Audio Suite™ software
  ▶ On the same network as all other Powersoft amplifiers

✓ Channel output pairs mono-bridgeable (lo-Z), or in parallel (hi-Z)

✓ Unique Powersoft technology for efficient, reliable, great sounding performance:
  ▶ Universal switch mode power supply with PFC (Power Factor Correction)
  ▶ Fixed frequency switch mode amplifier output stages
  ▶ Patented amplifier output filters with ripple cancellation network

✓ Front panel safety cover hiding output attenuators and 'Energy Save' switch

✓ All signal/control connectors Phoenix industry standard

✓ Front-to-rear airflow cooling with variable speed fan, temperature controlled

✓ Full protection circuitry: over/under AC voltage; severe signals (clipping, VHF, long-term RMS); DC; over-temperature; short circuit; mute at power on/off

✓ Also available without DSP and Ethernet port (Ottocanali 1204)

✓ Full four years warranty

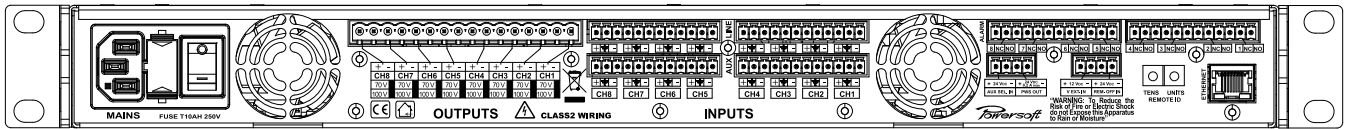BatFormer[1]

Ottocanali, partially equipped with BatFormers

Powersoft

Ottocanali 1204 DSP+ETH

8-Channel Power Amplifier with DSP and Ethernet for Lo-Z & Hi-Z Installations

Specifications

General

Number of channels				8			
	Mono-bridgeable per channel pair. Optional BatFormers® (transformers) per channel for 70 V or 100 V constant voltage operation; serial operation of channel pairs equipped with BatFormers for higher voltage possible.						
Output power			8-channel mode			mono-bridged mode	
EIAJ Test Standard, 1 kHz, 1% THD	4 Ω / Ch	8 Ω / Ch	70 V [1]	100 V [1]		8 Ω / Ch pair	16 Ω / Ch pair
	150 W	80 W	125 W	130 W		300 W	150 W
Max output voltage	37 V_{peak}		77 V_{peak}	151 V_{peak}		76 V_{peak}	
Max output current	15 A_{peak}		4.8 A_{peak}	3.4 A_{peak}		15 A_{peak}	

AC Mains Power

Power supply		Universal, regulated switch mode with PFC (Power Factor Correction)			
Operating voltage / Inrush current		100 V - 240 V ± 10%, 50/60 Hz / < 5 A $_{RMS}$			
Power factor cos (φ)		> 0.8 when > 500 W			
Consumption / current draw		@ 230 V		@ 115 V	
Energy Save on		14.6 W	0.34 A	13.9 W	0.26 A
Energy Save off		21.2 W	0.36 A	20 W	0.33 A
1/8 of max power @ 4 Ω		223 W	1.24 A	224 W	1.99 A
1/4 of max power @ 4 Ω		417 W	2.00 A	423 W	3.70 A

Thermal

Environmental operating temperature		0° - 45° C / 32° - 113° F			
Thermal dissipation		Fan, continuously variable speed, temperature controlled front to rear airflow			
		230 V		115 V	
Energy Save on		31.71 BTU/h	8.00 kcal/h	29.66 BTU/h	7.48 kcal/h
Energy Save off		53.20 BTU/h	13.42 kcal/h	50.12 BTU/h	12.64 kcal/h
1/8 of max output power @ 4 Ω		248.93 BTU/h	62.78 kcal/h	252.34 BTU/h	63.64 kcal/h
1/4 of max output power @ 4 Ω		398.97 BTU/h	100.62 kcal/h	419.41BTU/h	105.78 kcal/h

Audio

Gain		lo-Z	hi-Z @ 70 V	hi-Z @ 100 V
		32 dB	41 dB	44 dB
Frequency response		20 Hz - 19.5 kHz	57 Hz - 16 kHz	57 Hz - 15.5 kHz
S/N ratio (amplifier section)		> 92 dBA	> 92 dBA	> 92 dBA
Crosstalk separation		> 61 dB	> 61 dB	> 61 dB
Input sensitivity @ 8 Ω		20 Hz - 20 kHz (1 W @ 8 Ω, ± 0.5 dB, or 32/65 W @ 70/100 V, ± 2.5 dB)		
Max input level		0.63 V / -1.79 dBu		
Input impedance		10 kΩ balanced		
THD+N / SMPTE IMD / DIM100 IMD		typ. < 0.05% [2]		
Slew rate		12 V/μs @ 8 Ω, input filter bypassed		
Damping factor		> 500 @ 20-200 Hz (lo-Z)		

DSP

AD/DA converters	AD: 24bit/48kHz 100dB SNR, THD < 0.02% (20 Hz - 20 kHz); DA: 24bit/48kHz 102dB SNR, THD < 0.02% (20 Hz - 20 kHz)
Delay for time alignment	up to 16 ms per output
Crossover filters	Butterworth, Linkwitz-Riley, Bessel, 6-48 dB/oct
Input/Output equalizer	5 (input) / 8 (output) filters max (filter types: parametric, hi/lo shelving, hi/lo pass, band pass, band stop, all pass)
Limiters	Peak, RMS

Pilot Tone Detection and Output Load Monitor

Input voltage and frequency	0 V_{RMS} - 1 V_{RMS} in steps of 10 mV_{RMS}; 20 Hz - 22 kHz in steps of 10 Hz
Output voltage and frequency	0 V_{RMS} - 30 V_{RMS} in steps of 10 mV_{RMS}; 20 Hz - 22 kHz in steps of 10 Hz
Output load impedance	0 Ω - 1000 Ω in steps of 0.1 Ω

Front Panel

Indicators	7 multifunction LEDs per channel: 4 × green, 2 × yellow, 1 × red
Controls	Pushbutton enables 24 V DC at back PWS OUT connector (can also toggle LINE/AUX inputs). 8 output attenuators, energy save mode activation (per channel pair) DIP switch, DSP preset selection
Maintenance	Dust filter foam behind frontal silver colored panels

Rear Panel

Audio signal input connectors	2 × 12 pin Phoenix MC 1.5/12-ST-3.81 1803675
Loudspeaker output connectors	16 pin Phoenix MSTB 2.5/16-ST-5.08 1757158
Fault alarm connectors	12 pin Phoenix MC 1.5/12-ST-3.81 1803675
Aux command (triggering aux inputs) and aux voltage for remote on/off switching	4 pin Phoenix MC 1.5/4-ST-3.81 1803594
Aux front switch enabling and external 24 V DC (0.2 A) auxiliary supply	4 pin Phoenix MC 1.5/4-ST-3.81 1803594
Network data port Ethernet	1 × RJ45 with activity LED with 2 rotary address switches
AC mains	IEC C13 16A connector, AC mains cord with 3-pin plug 15A for US, IEC Schuko 16A for every other nation

Construction

Dimensions	W 483 mm / 19'', H 44.45 mm / 1.75'' / 1 RU, D 360 mm / 14.2''
Chassis	Steel safety/dust covers; 1 mm steel front panel, side reinforcement, rear support; 1 mm steel top & bottom lid, rear panel
Weight	5-11 kg / 11-24.3 lbs, depending on number of BatFormers installed

1) With BatFormer® inserted per channel.
2) Guaranteed by design.