

Unica™

4-Channel Fixed Installation Amplifier Platform



The Unica™ Series is a compact, 1RU amplifier platform developed primarily for installed applications. The 4-channel version includes 5kW, 9kW, 12kW, and 16kW total power models, making Unica™ one of the most power-dense solutions available.

The output channels can drive Lo-Z and 70/100V lines seamlessly, delivering up to 5200W @ 4Ω for the 16kW model, when asymmetrically loaded. The power supply allows worldwide operation (100-240VAC), and it is equipped with the latest generation of single-stage power factor correction (PFC). The proprietary Smart Rails Management (SRM) allows the supply rails to adapt in real time to the required output voltage to

maximize efficiency and reduce idle losses.

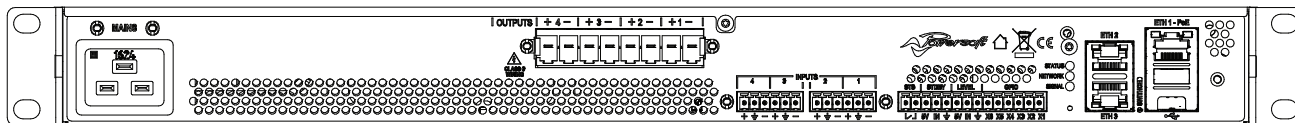
Unica™ platform features Powersoft's next-generation DSP for state-of-the-art processing and audio performance. The three 1Gb Ethernet ports, along with the native Dante™ and AES67 support allow for different network topologies including daisy-chain and Dante™ redundant.

The front panel display allows quick access to the amplifier operating status information for local monitoring. The PoE (Power over Ethernet) input allows for short recovery time in case of mains loss, as well as testing and monitoring loudspeakers 24/7 without the need for mains power.

Lastly, Unica™ Series amplifiers natively support cloud connectivity for remote monitoring and control from any device anywhere in the world via the Powersoft Cloud.

- ▶ Medium to large-scale venues
- ▶ Main systems, central or distributed, subwoofers, hi-Z/lo-Z
- ▶ Mission critical applications
- ▶ Theatres, performance venues
- ▶ Houses of worship
- ▶ Convention centres
- ▶ Business centres
- ▶ Cruise ships





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 1,5/6-ST-3,81
Dante™/AES67		4	3 x RJ45
Audio			
Default gain		32 dB	
		9K4	12K4 16K4
Input sensitivity		3.0 V _{rms} 11.8 dBu	3.5 V _{rms} 13 dBu 3.9 V _{rms} 14 dBu
Output noise floor (Analog Input)		-72 dBV(A) typical	
SNR (Analog Input)		113.6 dB(A)	114.8 dB(A) 116 dB(A)
Output noise floor (Dante™/AES67 Input)		-76 dBV(A) typical	
SNR (Dante™/AES67 Input)		117.6 dB(A)	118.8 dB(A) 120 dB(A)
Max input level		>+24 dBu	
Frequency Response		20 Hz - 20 kHz +0.0 dB/-1.0 dB, @ 8 Ω	
Crosstalk		<-80dB typical, 20Hz to 1 kHz range <-60dB @20kHz typical	
Input impedance		20 kΩ balanced	
THD+N (from 0.1 W to Half Power)		< 0.05%	
SMPTE IMD (from 0.1 W to Half Power)		< 0.01%	
Damping factor		>2500 20Hz to 500 Hz	
DSP			
AD converters		24 Bit Tandem™ @ 48 kHz 130 dB(A) Dynamic Range - 0.00005 % THD+N	
DA converters		24 Bit Tandem™ @ 48 kHz 132 dB(A) Dynamic Range - 0.00003 % THD+N	
Latency		2.6 ms analog Input to amplifier Output	
Onboard memory		Store and recall up to 50 amplifier snapshot	
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 linear phase (FIR), Butterworth,	
Crossover		Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)	
Limiters		RMS voltage, RMS current, Peak limiter, TruePower™, Dynamic EQ	
Damping control		Active DampingControl™	
Loudspeaker diagnostic		Pilot tone monitoring, average impedance monitoring, load impedance measurement <10 s	
Startup time		<0.5 s (with PoE backup power)	
Construction			
Dimensions		489 x 400 x 44.3 (WxDxH) mm 19.3 x 15.8 x 1.7 (WxDxH) in	
Weight		8 Kg (17.6 lb)	
IP Class		IP 20	
Environmental			
Operating temperature range		0°C to +50°C (derating above 35°C)	
Storage relative humidity range		10% to 85% humidity (non condensing)	

Data subject to change without notice.

Output Stage	5K4	9K4	12K4	16K4	
Commercial total rated power	5000	9000	12000	16000	W
Maximum output power	per channel @ 100 V (symmetrical)*	1250	2250	3000	4000 W
	per channel @ 70 V (symmetrical)*	1250	2000	2500	3000 W
	per channel @ 16 Ω (symmetrical)*	700	900	1100	1300 W
	per channel @ 8 Ω (symmetrical)*	1250	1600	2000	2500 W
	per channel @ 4 Ω (symmetrical)*	1250	2250	3000	4000 W
	per channel @ 2 Ω (symmetrical)*	1250	2000	3000	4000 W
	per bridged pair @ 8 Ω (symmetrical)*	2500	4500	6000	8000 W
	per bridged pair @ 4 Ω (symmetrical)*	2500	4000	6000	8000 W
	per channel @ 100 V (asymmetrical)**	1800	3200	4000	5000 W
	per channel @ 70 V (asymmetrical)**	1500	2500	3000	3500 W
	per channel @ 16 Ω (asymmetrical)**	700	900	1100	1400 W
	per channel @ 8 Ω (asymmetrical)**	1250	1600	2000	2700 W
	per channel @ 4 Ω (asymmetrical)**	1800	3200	4000	5200 W
	per channel @ 2 Ω (asymmetrical)**	1800	2500	3500	4500 W
Maximum unclipped output voltage	140	170	195	220	V _{peak}
Maximum output current	50	60	70	80	A _{peak}

*. Available by driving and loading all the channels symmetrically.

**. Maximum power-sharing capacity per channel

Power & Thermal			5K4	9K4	12K4	16K4	
@ 115 V	Idle	Input Power	55	55	55	55	W
		Current Draw	0.65	0.65	0.65	0.65	A _{rms}
		Thermal Loss	190	190	190	190	BTU/h
	1/8 Max Power @ 4Ω	Input Power	869	1463	1951	2600	W
		Current Draw	7.68	13.1	17.5	23.2	A _{rms}
		Thermal Loss	833	1147	1528	2046	BTU/h
@ 230 V	Idle	Input Power	62	62	62	62	W
		Current Draw	0.52	0.52	0.52	0.52	A _{rms}
		Thermal Loss	211	211	211	211	BTU/h
	1/8 Max Power @ 4Ω	Input Power	880	1450	1940	2550	W
		Current Draw	4.43	6.6	8.8	11.6	A _{rms}
		Thermal Loss	870	1108	1500	1875	BTU/h
Power supply		Universal regulated switch mode with PFC and SRM					
Nominal Voltage		100-240 VAC @ 50/60 Hz (400 VAC surge)					
Operating Voltage		80-265 VAC @ 50/60 Hz					
Supply tolerance		+10%-10%					
Power system		TT/TN					
Overvoltage category		II					
Class of equipment		I					
AC Mains connector		IEC C20 inlet (20 A max) region-specific power cord provided					
Eco Mode consumption		35 W					
Standby consumption		20 W Typical, CPU fully functional					
PoE Input		Class 4 or higher					

