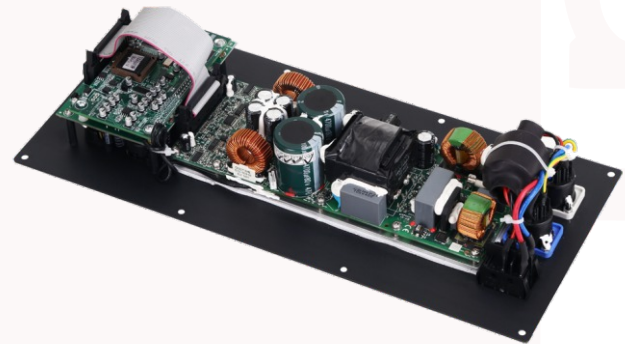


PDA500PF is a complete solution dedicated to 1-way or 2-way self-powered loudspeakers. Designed to meet different applications, it provides 2 channels with output power of 2x500W@4 Ohm or 2x250W@8 Ohm. In addition it offers a full set of added value features such as on board DSP and RS485 connection for monitoring and control via dedicated PC software. To guarantee maximum reliability, the **PDA500PF** includes a highly efficient universal switch mode power supply with PFC (Power Factor Correction) which provides a total 1kW power to the 2 output channels. The 2 output stages use the well-known Pascal Class D SPRO2 module. The **PDA500PF** includes a set of sophisticated processes for loudspeaker, implemented by the powerful M704 DSP running 48kHz/24bit [96 bits precision for the internal intermediate processes] and high performance

24bit AD/DA Converters. Processes as Noise Gate, up to 512 taps FIR filters OR up to 48dB/Oct IIR Hp/Lp filters for X-OVER, parametric EQs per input and output sections, RMS compressor, alignment delay are available, all in all everything needed to optimize a self-powered loudspeaker. Moreover the Clip/Limiter function per channel provides output monitoring to prevent speaker damage with gentle gain reduction at clip threshold, in addition to the efficient heat dissipation system and Over-Heat protection which themselves ensure a reliability without compromises. Furthermore the **PDA500PF** is also equipped with a Dynamic Loudness function and an useful Pink/White noise generator. All setup parameters for input mixing, DSP features and the limiter setting are accessible by using the remote PC software. A Powerful 512taps FIR is available for the System Phase Correction, based on System Response measurement.



Features

Outstanding Performance

- High power output: 2 x 500W @ 4Ω or 2 x 250W @ 8Ω
- Switched-Mode Power Supply with PFC and auto voltage sensing
- Pascal Class D Amp Module - full bandwidth PWM modulator with ultra low distortion
- Full protection circuitry including Over-Current, Over/Under-Voltage, Output DC and Over-Temperature
- Excellent sonic performance with 24bit high end converters coupled with 48kHz sample rate

Top-grade DSP Engine

- 10 band parametric equalization per input channel
- 8 band parametric equalization per output channels
- 12dB ADC Headroom is available
- FIR OR IIR Filters for X-OVER:
- The X-Over can be implemented both by FIR filters OR IIR Hp/Lp, as desired by the user which can select the FIR or IIR use by Sw.
- FIR: Crossover filters can be created by the user selecting from 256 up to 512 taps, the FIR type and the Out Band attenuation.
- IIR: Crossover filters with slopes from 6dB/Octave up to 48dB/Octave including Butterworth, Bessel, Linkwitz-Riley and

customizable topologies

Each output features a precision RMS Limiter with selectable Attack/Release time and Threshold.

On the Low Output, a Bell type Dynamic Filter for Driver protection is available.

Adjustable Delay time up to 161 ms for input and up to 81ms for output channels

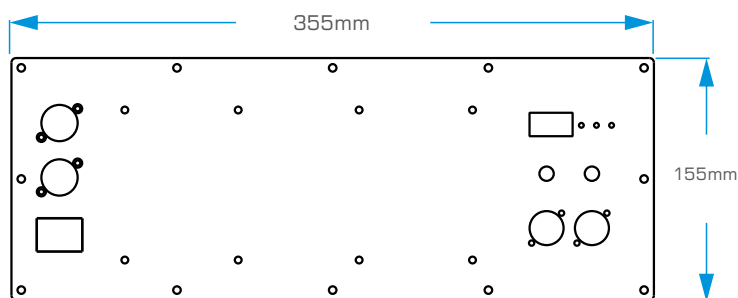
Input channel includes a Noise Gate function, Pink/White noise generator, sophisticated Dynamic Loudness function and a High-Pass filter with slopes from 6dB/Octave up to -48dB/Octave including Butterworth, Bessel, Linkwitz-Riley and a RMS Compressor.

Network Connection

Rs485 connection for system setup, monitoring and control via fully manageable remote PC software

Control

- Simultaneous control up to 32 units via PC software
- 8 Preset Selection by using rotary encoder switch
- Security Lockout



Power & Amplifier Sections

Number of Channels	----- 2
Max Output Power @ 8 ohms	----- 2 x 250W
Max Output Power @ 4 ohms	----- 2 x 500W
Output Circuitry	----- Class D - full bandwidth PWM modulator with ultra low distortion
Output Voltage	----- +/-70 V (SE Mode unloaded) / Bridged +/-140V(BTL Mode unloaded)
THD @ Rated power 4Ω (1kHz)	----- <0.005% (20 Hz - 20 kHz, 8Ω load, 3dB below rated power)
Signal To Noise Ratio	----- >120 dB (A-weighted, 20 Hz - 20 kHz, 8Ω load)
Frequency Response	----- 20 Hz - 20 kHz ± 0,15 dB (8Ω load, 1 dB below rated power)
Damping Factor	----- >1000 (8Ω load, 1kHz and below)
Power Supply	----- Switch mode power supply with PFC (Power Factor Correction) and integral standby converter
Operating Range	----- Universal Mains, 85-265V
Consumption / Current draw and	--- 11.2W / -A / 38.3 BTU/h (Idle)
Thermal dissipation @ 230 V	----- 173W / -A / 143.4 BTU/h (1/8 max. power@4Ω)
Protections	----- Over-Current, Over/Under Voltage, Output DC and Over-Temperature

Audio

Analog Input	----- 1 x XLR electronically balanced, +12dB
Analog Output	----- 1 x XLR electronically balanced (Link)
AD & DA Converters	----- Cs42528 24bit
Frequency Response (DSP)	----- 20 Hz - 20 KHz; -0.5dBu at 20 Hz and 20 kHz

DSP & Processing

DSP Engine	----- MARANI M704
DSP Resolution	----- 24bit (data) x 24 bit (coeff.), 54 bit accumulation registers 96 bit precision on intermediate processing data
Parametric Equalization	----- 10 filters per input channel; 8 filters per output channel
Filter Type	----- Bell, Low/High Shelving variable Q, Low/High Pass Q Var and Notch
Filter Gain	----- From -15dBu up to +15dBu by 0.5dBu resolution steps
Center Frequency	----- Selectable with a 1Hz resolution step from 20Hz up to 20kHz
Bell Filter Q/BW	----- Q from 0.5 up to 10 by 0.1 resolution steps
System Phase Correction	----- 512 taps FIR
Crossover section FIR	----- From 256 to 512 taps coefficients, FIR type selection and out of band attenuation, operating from 250Hz, up as Xover point; accepted coefficients generated by external applications.
Crossover section IIR	----- HPF/LPF Butterworth 6/12/18/24/48dB per octave; Linkwitz-Riley 12/24/36/48dB per octave; Bessel 12/24dB per octave. Filter resolution 1Hz
Input Special Filters	----- FIR up to 512 Taps for System Phase Correction working with Internal Wizard Tool or importing Coefficients from External Application High-Pass filter up to 48dB/Oct; Sophisticated Dynamic Loudness
Input RMS Compressor	----- Drive from -12 to 6dBu; Threshold from -18dBu up to -12dBu; Attack time from 5ms up to 100ms; Knee 0~100%; Ratio from 2:1 to 100:1; Release time from 40ms up to 1000ms (10ms resolution).
Output Peak Limiter	----- Threshold from -18dBu up to +12dBu Release time from 40ms up to 1000ms; Attack time from 1ms up to 100ms;
Delay	----- 161 ms, 20.8us increment / decrement steps on Input Channel and 81ms, 20.8us increment / decrement steps on each output Channel

General

Panel	----- GAIN pot. -30dBu ~ 0dBu PRESET EQ 8 positions Rotary encoder switch Red LED (Power); Yellow LED (Link); Green LED (Signal presence) 1 x XLR female connector (Input) 1 x XLR male connector (Link Output) 2 x RJ45 connector (M-LAN Rs485) 2 x Locking PowerCON® 20A: AC Mains (blue) - AC Link (white); Power On/Off
Dimensions	----- 355x70x155mm
Weight, Net / Shipping	----- 6.61 lbs (3 Kg) / 8.82 lb (4 Kg)