

**PDA300I** is a complete solution dedicated to 2-way self-powered loudspeakers. Designed to meet different applications, it provides 2 channels with output power of 300W @ 4ohm. In addition it offers a full set of value adding features such as on board DSP. To guarantee maximum reliability, the **PDA300I** includes a highly efficient switch mode power supply which provides power to the 2 output channels. The output stage uses the well-known ICEPower 300ASC+300AC Class D module - full bandwidth PWM modulator obtaining ultra low distortion, high dynamic range and also equipped with a full set of circuit protections. The **PDA300I** includes a set of sophisticated processes for loudspeaker, implemented by the powerful M504 DSP running 96kHz/24bit [96 bits precision for the

internal intermediate processes]. Processes as Noise Gate, crossover filters, parametric EQs per input and output sections, alignment delay, 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 uncompromised reliability. Furthermore the **PDA300I** is also equipped with a Dynamic Boost Filter. All setup parameters for input mixing, DSP features and the limiter setting are accessible by using the remote PC software.



### Features

#### Outstanding Performance

- High power output: 2x300W @ 4ohms
- Switched-Mode Power Supply with auto voltage sensing
- ICEPower 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 96kHz sample rate

#### Top-grade DSP Engine

- 3 band equalization on input channel
- 5 band parametric equalization on output channel
- EQ can be selected as Bell, Hi/Lo-Shelving Q
- Input High-Pass filter up to -12dB/Octave
- Crossover filters with slopes from 6dB/Octave up to 24dB/Octave including Butterworth, Bessel, Linkwitz-Riley
- Output channel features a precision dynamic range controller

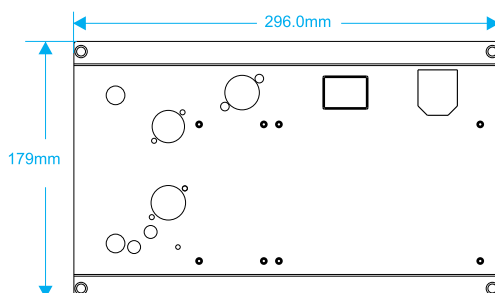
- Adjustable Delay time up to 15 ms for input and 5 ms for woofer output. Input channel includes a Noise Gate function
- Dynamic Boost Filter function
- Output Peak Limiter

#### Direct PC/Network Connection

- Rs485 connection internally on the DSP Board, 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 Function

|                            |  |
|----------------------------|--|
| Number of Channels         | 2  |
| Max Output Power @ 4 ohms  | 2x300W   |
| Output Circuitry           | Class D - full bandwidth PWM modulator with ultra low distortion |
| Output Voltage             | 70 Vp / 140 Vpp (unloaded) / Bridged 140 Vp / 280 Vpp (unloaded) |
| THD + N                    | <0.01%   |
| Signal To Noise Ratio      | > 102 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   |
| Operating Range            | Universal Mains, 85-268V   |
| Protections                | Over-Current, Over/Under Voltage, Output DC and Over-Temperature |
| Maximum Input/Output Level | +12dBu   |

### Audio

|                    |  |
|--------------------|--|
| Analog Input       | 1 x XLR electronically balanced, +12dB |
| Analog Output      | 1 x XLR electronically balanced (Link) |
| AD & DA Converters | Cs42528 24bit                          |

### DSP & Processing

|                           |   |
|---------------------------|---|
| DSP Engine                | MARANI M504   |
| DSP Resolution            | 24bit (data) x 24 bit (coeff.), 54 bit accumulation registers, 96 bit precision on intermediate processing data   |
| Parametric Equalization   | 3 filters on input channel, selected as Lo-Shelving, Bell and Hi-Shelving<br>5 filters on output channel, selected as Bell or Shelving Q (only one is Lo-Shelving Q on the low, and is Hi-Shelving Q on the high) |
| Filter Type               | Bell, Low/High Shelving variable Q  |
| Filter Gain               | Input from -12dBu up to +12dBu by 0.5dBu resolution steps<br>Output from -6dBu up to +6dBu by 0.5dBu resolution steps   |
| Center Frequency          | Selectable with a 1Hz resolution step from 20 Hz up to 20 kHz   |
| Filter Q/BW               | Type Bell: Q from 0.4 up to 8 by 0.1 resolution steps<br>Type Shelv: Q from 0.4 up to 5 by 0.1 resolution steps   |
| Crossover section HPF/LPF | Butterworth 6/12/18/24dB per octave<br>Bessel and Linkwitz-Riley 12/24dB per octave<br>Filter resolution 1Hz  |
| Peak Limiter              | Threshold from -18dBu up to +12dBu<br>Release time from 25ms up to 350ms (1ms resolution up to 200ms, 5ms res. up to 350ms)<br>Attack time from 1ms up to 50ms (1ms resolution)                                   |
| Delay                     | up to 15ms for each input, and up to 5ms for each output, with step of 20.8us   |
| Ground Noise              | -86 dBu   |

### General

|                        |   |
|------------------------|---|
| User Preset            | 8   |
| Panel                  | 1 x GAIN pot.<br>1 x PRESET EQ 8 Position Rotary encoder switch<br>1 x XLR female connector (Input)<br>1 x XLR male connector (Link Output)<br>1 x Neutrik® Speakon NL4 (Speakon)<br>1 x MIC/LIFT Switch<br>1 x Ground-lift toggle Switch<br>IEC C13 16A Connector; On/Off Power Switch |
| Dimensions             | 11.65" x 3.15" x 7.05" (296 x 80 x 179 mm)  |
| Weight, Net / Shipping | 6.09 lbs (2.76 Kg) / 8.83 lbs (4 Kg)  |