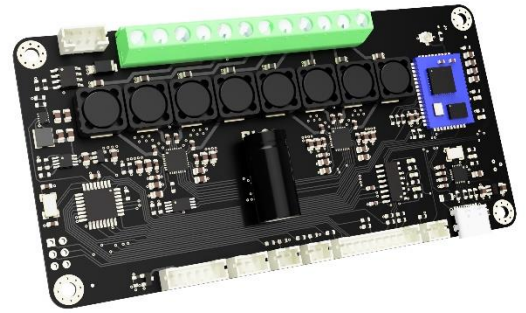


## ZOUDIO AIO438

- **4 channel class-D amplifier**
- **Bluetooth V5.0 APT-X / A2DP / AAC**
- **Digital Signal Processor**
- **Windows™ configuration tool**
- **High power, high efficiency, low distortion**
- **Small footprint**



## Product description

High performance speaker building has never been easier. The ZOUDIO AIO438 combines all modern features in one easy to use and affordable module. The included wiring harness makes installation quick and reliable. The compact form factor allows for installation in nearly every speaker. Due to its high efficiency it puts out a lot more power than its size suggests. Besides long-range Bluetooth streaming, wired input is supported. The DSP allows for powerful filtering, in some cases replacing a big and expensive passive crossover altogether. Settings can easily be changed using the Windows™ configuration tool.

Direct product link (purchase, downloads, pictures): [www.zoudio.com/product/aio438](http://www.zoudio.com/product/aio438)

## Features

### Amplifiers

- 2x Texas Instruments **TAS5825M** (successor of the TPA3116/TPA3118 with lower distortion and built in DSP)
- Output power up to **4x 38W (4Ω)**, 2x 65W (2Ω) or 2x38W (4Ω) + 1x 65W (2Ω)
- Automatic **thermal foldback** and recovery for sustained power

### Connectivity

- **Bluetooth V5.0** APT-X / A2DP / AAC with long-range external antenna
- **Wired** analog input

### Power

- Wide range of accepted power supplies: **5 to 24V**
- **Low idle power** consumption, ideal for battery powered applications
- Programmable shutdown voltage and low power indication


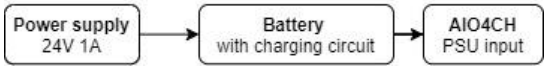

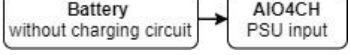
### Settings

- **Input mixer** can be changed per 2 channels (left/right/mono)
- 13 general filters (**equalizers**) and 5 filters per channel (**crossovers**)
- 2 equalizers that can be toggled with the **EQ button** (e.g. indoor/outdoor, bass-boost)
- **Dynamic** (volume dependent) **equalizers**
- Programmable **delay** per channel
- Output configurable as **4.0 / 2.0 / 2.1**
- All settings can be changed using the **configuration tool for Windows™**, which can be downloaded on the product page.
  
- **Advanced features are available for large orders** (>50 pieces). This includes, but is not limited to, custom Bluetooth name, modified firmware, limiters, special connectors/cables and pre-programmed boards.

## Specifications

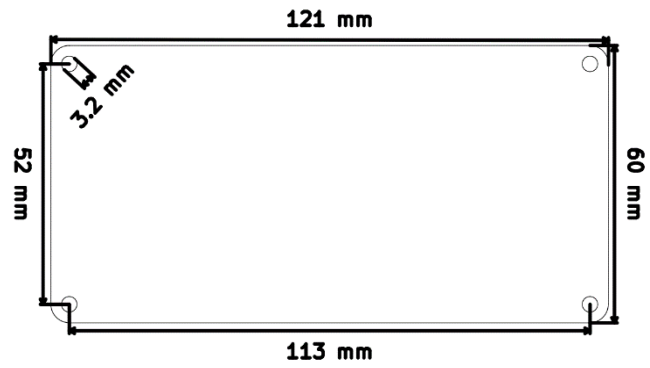
Parameter	Min	Typ	Max	Unit	Notes
Power supply voltage	4.5		26.4	Volts	
Operating temperature	-10		+70	Celsius	
BT range		15		Meters	Onboard antenna, line-of-sight
Analog input voltage			3.2	Volts	Single-ended
THD+N			0.05	%	1KHz sine at 1W, 12V
Switching frequency		768		KHz	1SPW modulation
Output power (BTL)			8	Watt	8R, 12V, 1% THD+N
			16	Watt	4R, 12V, 1% THD+N
			30	Watt	8R, 24V, 1% THD+N
			62	Watt	4R, 24V, 1% THD+N, thermally limited
Idle power		79		mA	12V, all channels enabled
		88		mA	24V, all channels enabled

## Connections

Power configuration	Recommended
	-12V 5A+ -19V 6A+ -24V 7A+
	-ZOUDIO BMS345 -Sure BCPB2/BCPB3/BCPB4
	-6/12/18V lead-acid (24V not supported!) -Protected lithium packs: 2-6S Li-Ion/Li-Po, 2-7S LiFePO4
	<i>Note: board has no charging circuitry. CHG input is connected parallel to the PSU input for easy wiring of an external charger</i>

## Dimensions

-Height: 18 mm



## Disclaimers

- Wrong usage of this product will void your warranty
- For questions, remarks and/or custom orders please visit [ZOUDIO.com](http://ZOUDIO.com) and contact us

## Revisions

Date	Revision	Change
7 nov 2021	0.1	Document release