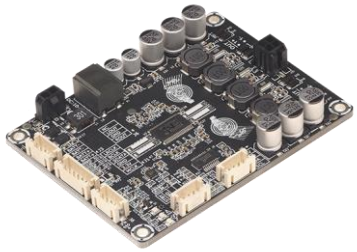
Digital Input Series

2 x 30 Watt Digital Input Class D Audio Amplifier Board & DAC - TAS5756 (AA-AB32255)



Key Features:

- **Output Power**
  30W@ 4Ohm 19V DC THD+N 10%
- **High Performance DAC**
- **I²S Input Supported**
- **3-Wire Digital Input**
  (No MCLK Required)
- **44.1kHz-48kHz Sample Rate**
- **16Bit/24Bit Resolution**
- **Net Weight: 58g/ 0.13 lbs (±10%)**
- **Size: 3.6 x 2.7 x 0.72 inches**

Distributors:

PARTS EXPRESS YOUR ELECTRONICS CONNECTION · MCM · AXIOMEDIA · HOBBYHIFILADEN · AUDIOPHONICS · Yokohama Bayside Net

All these boards are per-tested with our power supply solution to comply with FCC and CE. For all customers who need those information, please contact our distributor or Sure Electronics. RoHS compliant will need an MOQ of 1000pcs per order.

Ready for:

FC CE

RoHS

Contact info

- **Email:**
  info@sure-electronics.com

WONDOM™

Electrical Specifications

Specifications typical @ +25℃, Powered by 19V DC, unless otherwise noted. Specifications subject to change without notice.

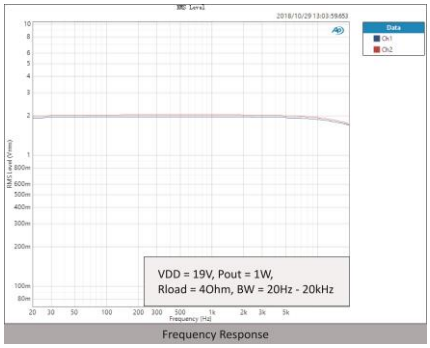
Parameter(s)	Conditions	Min.	Typ.	Max.	Unit (s)
Power Supply	J4	10	19	24	VDC
	J3 (Battery, powered by WONDOM BCPB Series)	12	-	21	VDC
Idle Power	SD Floating	0.71	0.75	0.81	W
Maximum Current	30W @ 4Ohm	-	3	-	A
Efficiency	30W @ 4Ohm (Only the amplifier)	-	90	-	%
Minimum Load Impedance	-	-	4	-	Ω
Switching Frequency	SD Floating, 8 x Fs, LRCK = 48kHz	-	384	-	kHz

Audio Performance

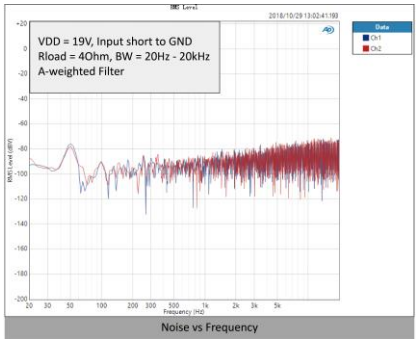
Specifications typical @ +25℃, Powered by 19V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter(s)	Conditions	Min.	Typ.	Max.	Unit(s)
Gain	Can be adjusted to -100dB with WONDOM Volume Control Board	-	28	-	dB
Output Power	@4Ω THD+N 10%	-	30	-	W
Bandwidth @ ±3dB	@4Ω	20	-	20k	Hz
THD	@4Ω, 1W, 1kHz	-	0.05	-	%
Output Noise Level	A-weighting	-	80	-	μV
SNR	THD+N <1%, A-weighting	-	102	-	dB

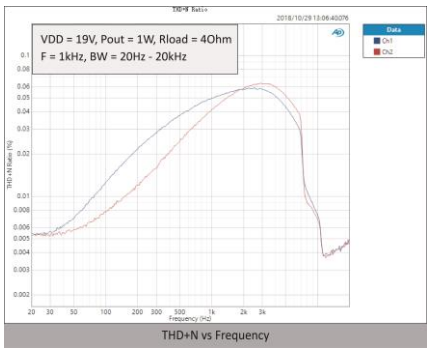
Typical Performance Graphs



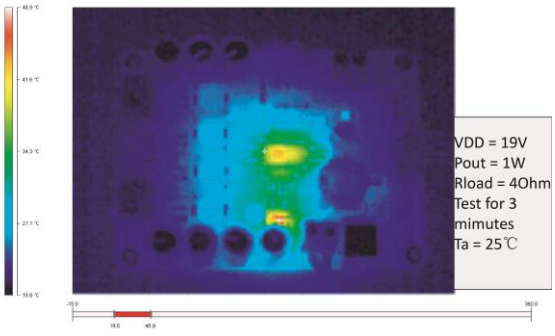
Frequency Response



Noise vs Frequency



THD+N vs Frequency



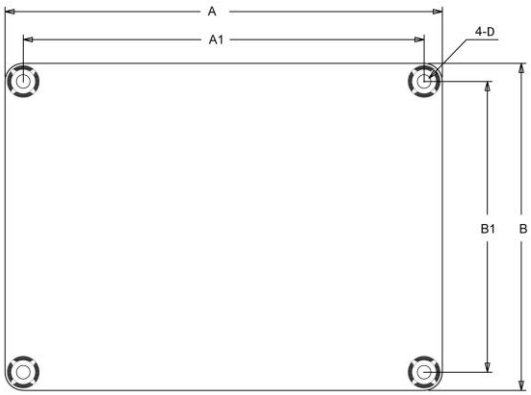
Analog Input

For customer who wants analog input, we provide following ADC board for easy connection.

SKU	Description
AA-AB41161	CS5343 Analog to I2S Decode Board

All parameters were tested with APx 515 audio analyzer and AP AUX-0025 filter. For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail customers)

Mechanical Dimensions



Dimensions	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	D (inch/mm)
	3.6/91.44	3.3/83.82	2.7/68.58	2.4/60.96	0.14/3.60

Notes:
· All dimensions are typical in inches (mm)
· Tolerance x.xx = ±0.02 (±0.50)

Height: 0.72inch/18.4mm (±10%)

Notes:
1. The output power is rated at the condition THD+N 10%,1kHz sine wave.

2. Stresses beyond the power supply range maximum ratings may cause permanent damage. Please connect to the power supply within range.

3. This amplifier is equipped with complete protection circuit, such as Over Temperature, Overcurrent, Clock Error, DC and Short-Circuit Protection.

4. None typical load may cause rating power reduction.

5. Dimensions mean length and width of PCB only, excluding excessive part out of the PCB outline.

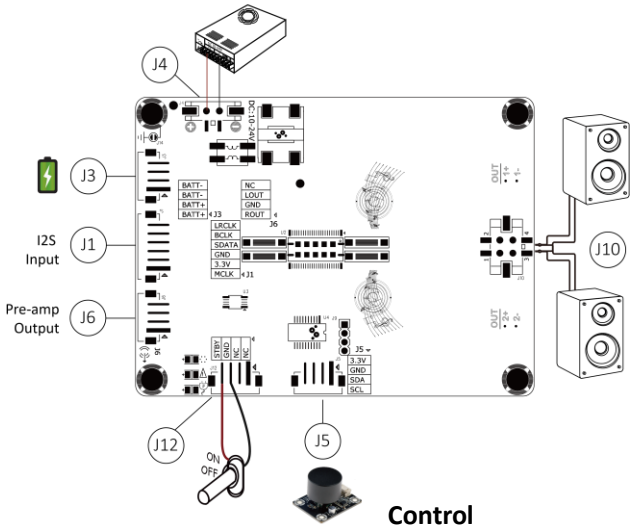
6. All parameters were tested with APx 515 audio analyzer and AP AUX-0025 filter. Linear Power Supply units were used for testing.

7. Sure Electronics promises all standard products life cycle more than 5 years. Sure Electronics reserves the right to update the version without notice. All the products sent to retail customers are the latest version. We will provide back-to-order service (100 Pieces MOQ needed) for our distributors in 5 years.

8. Suggested power supply solution: Huntkey HKA03619021-8C 19V 2.1A 40W AC/DC Power Adapter (PS-SP11504)
If you have other power supply requirements, please feel free to contact us.

9. This audio amplifier board supports and only supports 3.3V Logic level.

Connections



Power Supply

Power Supply
- J4, Molex-2Pin-3mm

Pin	Definition
1	GND
2	VCC

Range: DC10-24V

Battery Power
- J3, PH-4POS-2mm

Pin	Definition
1	BATT+
2	BATT+
3	BATT-
4	BATT-

Range: DC12-21V

I²S Input
- J1, PH-6POS-2mm

Pin	Definition
1	MCLK (Optional)
2	3.3V
3	GND
4	SDATA
5	BCLK
6	LRCK

Audio Output

Pre-amp Output
- J6, PH-4POS-2mm

Pin	Definition
1	ROUT
2	GND
3	LOUT
4	NC

This board can be used as used as a I2S to Analog signal converter.

Speaker Output
- J10, Molex-4Pin-3mm

Pin	Definition
1	OUT2+
2	OUT1+
3	OUT2-
4	OUT1-

Control

Standby Control
- J12, PH-4POS-2mm

Pin	Definition
1	NC
2	NC
3	GND
4	STBY

Short circuit “STBY” and “GND” to enable standby function.

Volume Control
- J5, PH-4POS-2mm

Please use WONDOM Rotary Potentiometer Board (AA-AB41152) to get the volume control function.

Pin	Definition
1	3.3V
2	GND
3	SDA
4	SCL

WONDOM™

Sure Electronics

Make Your Audio Application Simple!

NO.9, Weidi Road, Xianlin University City, Qixia District,
Nanjing, Jiangsu Province, P.R.C

store.sure-electronics.com
www.wondom.com
Mail: store@sure-electronics.com
Skype: surewebstore