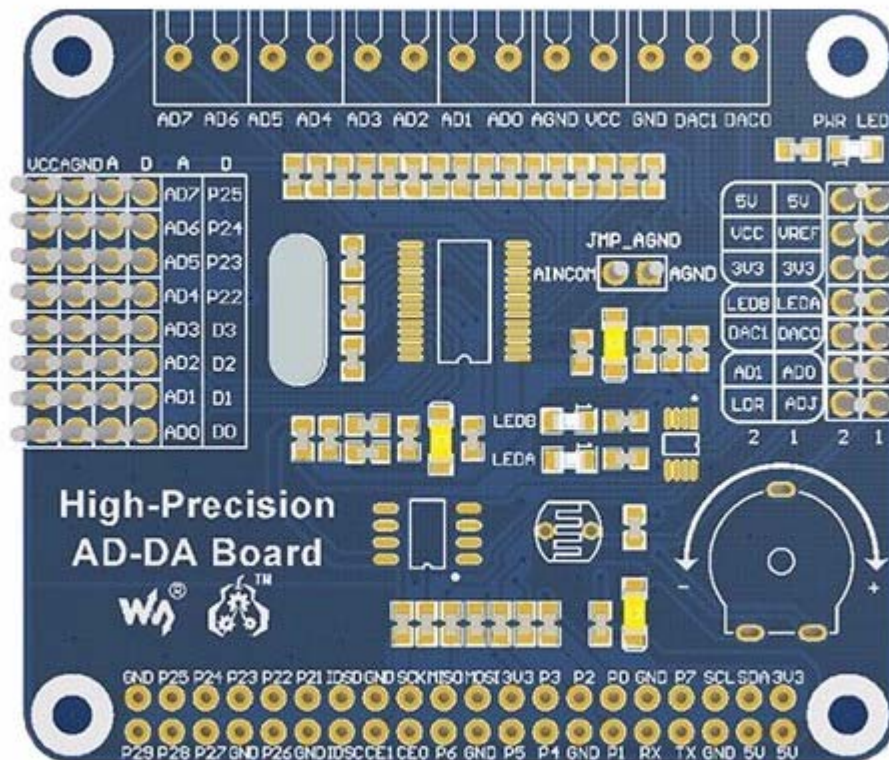# Raspberry Pi High-Precision AD/DA Board

SKU 114990831

There's no AD/DA function on the Raspberry Pi GPIO interface, this may trouble you in the Pi development. However, it won't be a problem anymore. The High-Precision AD/DA Board allows you to add high-precision AD/DA functions to the Raspberry Pi.

Description

What is Raspberry Pi High-Precision AD/DA Board

There's no AD/DA function on the Raspberry Pi GPIO interface, this may trouble you in the Pi development. However, it won't be a problem anymore. The High-Precision AD/DA Board allows you to add high-precision AD/DA functions to the Raspberry Pi.

Support Raspberry Pi

Raspberry Pi 1 Model A+
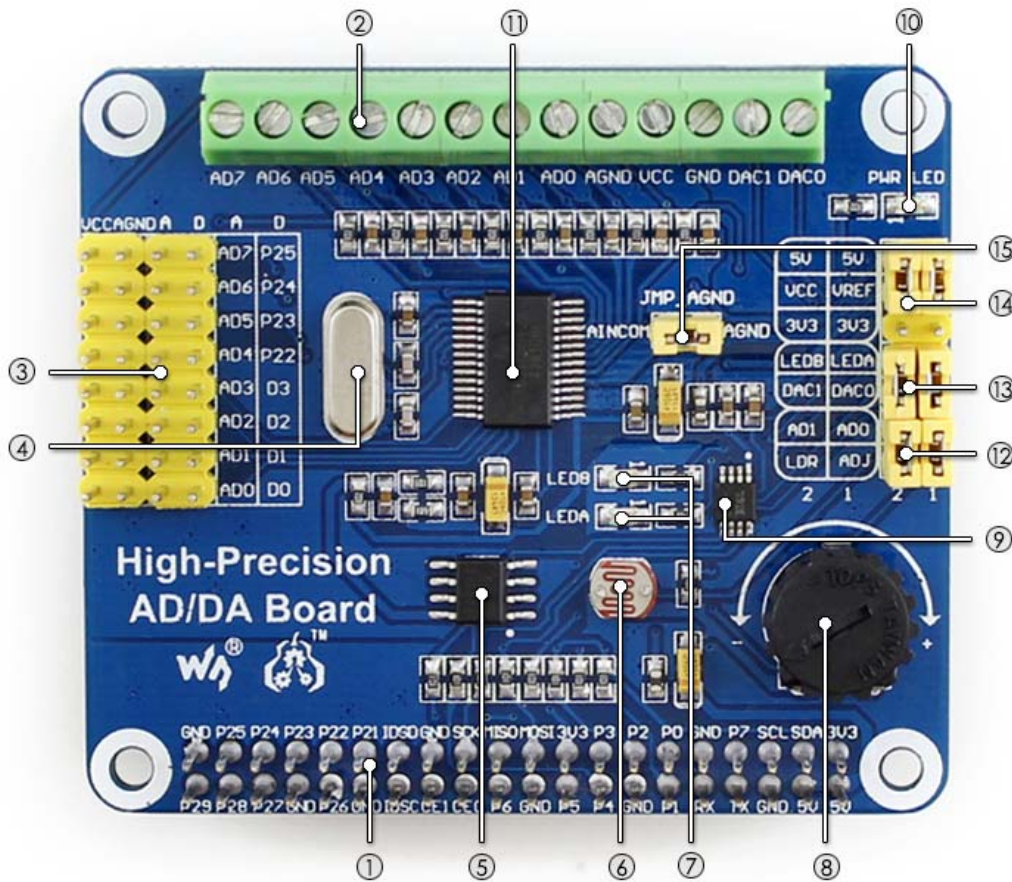
Raspberry Pi 1 Model B+

Raspberry Pi 2 Model B

Raspberry Pi 3 Model B

Key Features

- Onboard ADS1256, 8ch 24bit high-precision ADC (4ch differential input), 30ksps sampling rate
- Onboard DAC8532, 2ch 16bit high-precision DAC
- Onboard input interface via pinheaders, for connecting analog signal, the pinout is compatible with Waveshare sensor interface standard, easy to connect various analog sensor modules
- Onboard input/output interface via screw terminals, for connecting analog/digital signal
- Features AD/DA detect circuit, easy for signal demonstration

What's On Board

1.**Raspberry Pi GPIO interface:** for connecting with the Pi

2.**AD/DA input/output:** screw terminals

3.**AD input:** pinheaders, the pinout is compatible with Waveshare sensor interface standard, easy to connect various analog sensor modules

4.**7.68M crystal**

5.**LM285-2.5:** provides reference voltage for the ADC chip

6.**Photo resistor**

7.**LED output indicator**

8.**10K potentiometer**

9.**DAC8532:** 16bit high-precision DAC, 2ch

10.**Power indicator**

11.**ADS1256:** 24bit high-precision ADC, 8ch (4ch differential input)
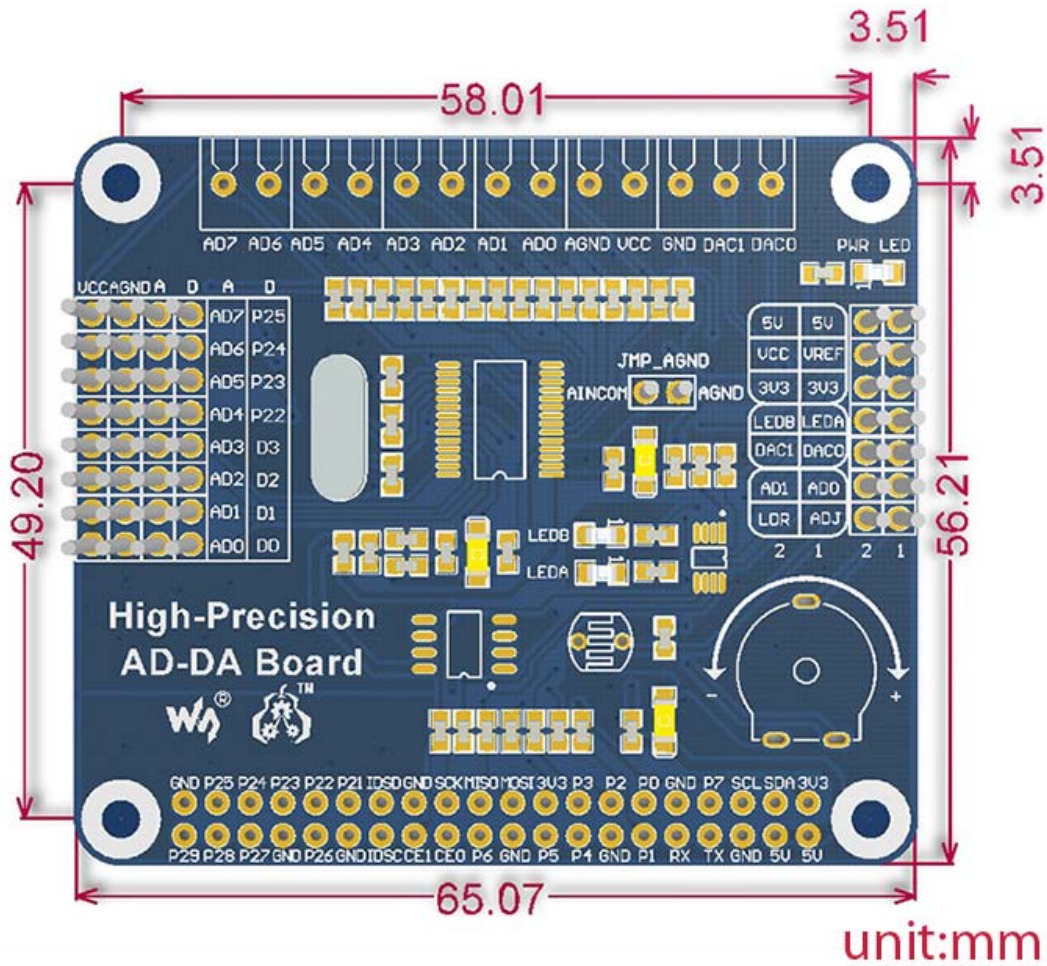
12.**ADC testing jumper**

13.**DAC testing jumper**

14.**Power selection jumper**

15.**ADC reference ground configuration:** when AD single inputted, the AINCOM is reference terminal, can be connected to GND or external reference voltage

Interface Definition

Symbol	Pin	Description
3.3V	1, 17	Power supply (3.3V)
5V	2, 4	Power supply (5V)
NC	3, 5, 7, 8, 10, 18, 22, 24, 26, 27, 28, 29, 32, 36, 38, 40	NC
GND	6, 9, 14, 20, 25, 30, 34, 39	Ground
DRDY	11	ADS1256 data ready output, low active
RESET	12	ADS1256 reset input
PDWN	13	ADS1256 sync/power off input, low active
CS0	15	ADS1256 chip select, low active
CS1	16	DAC8532 chip select, low active
DIN	19	SPI data input
DOUT	21	SPI data output
SCK	23	SPI clock
GPIO	31, 33, 35, 37	extend to sensor interface

Raspberry Pi High-Precision AD/DA Board＊1