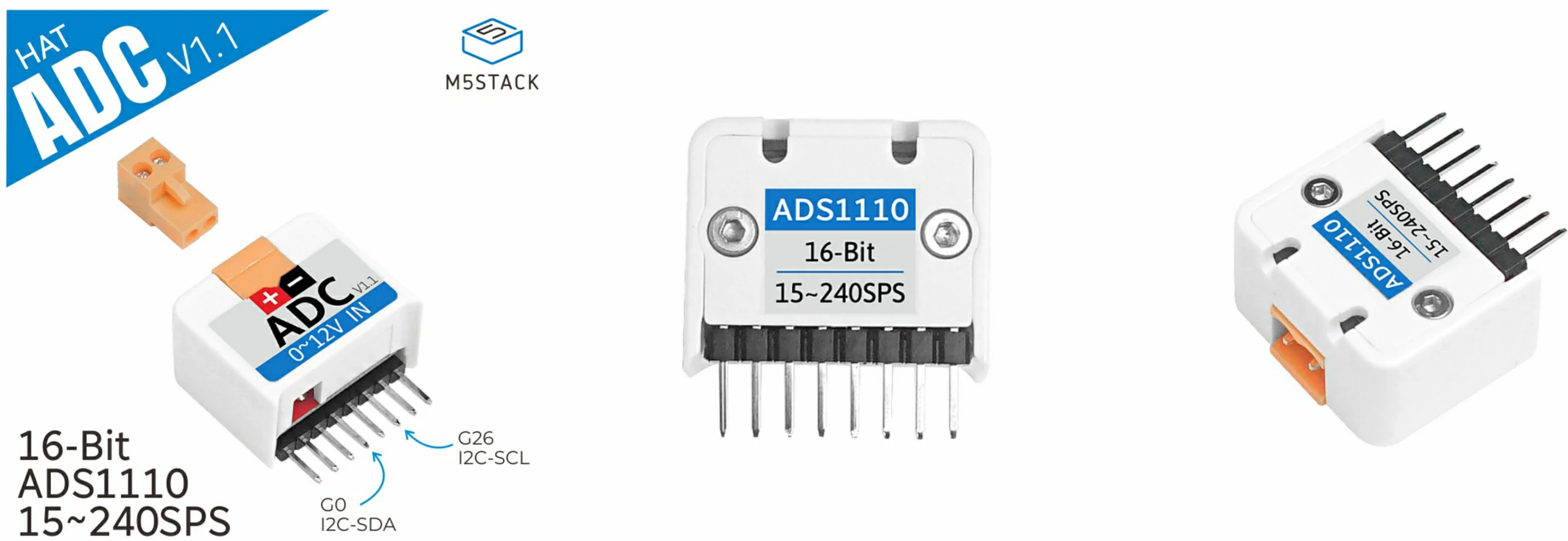


ADC HAT

SKU:U069-V11



Description

ADC HAT is another type of C-HAT specifically design for M5StickC controller. Same as ADC unit, this is an ADC converter component for stickc. Packed with an ADC converter chip ADS1110, which is a fully differential, 16-bit, self-calibrating, delta-sigma A/D converter. Extremely easy to design with and configure, the ADS1110 allows you to obtain precise measurements with a minimum of effort.

The ADS1100 consists of a delta-sigma A/D converter core with adjustable gain, a clock generator, and an I2C interface.

ADS1110 itself is able to accept a differential input from $-5 \sim +5$ V, but we have limited the input to $0 \sim 12$ V by adding on the peripheral circuit design of this IC.

The main differences from the previous version of HAT-ADC are as follows:

- Input channels:** The ADS1110 has single-ended and differential input channels, while the ADS1100 has only single-ended input channels.
- Reference voltage:** The ADS1100 only has a fixed 1.25V internal reference voltage, while the ADS1110 has two options, internal reference voltage and external reference voltage, which can be programmed according to needs.
- Resolution:** ADS1110 has 16-bit resolution, while ADS1100 only has 12-bit resolution.
- Sample rate:** The maximum sampling rate of the ADS1110 is 860 samples/sec, while the maximum sampling rate of the ADS1100 is 128 samples/sec.

Product Features

- Input: 0-12V
- Software Development Platform: Arduino, UIFlow(Blockly, Python)
- ADS1100
 - 16-bits Resolution
 - CONTINUOUS SELF-CALIBRATION
 - SINGLE-CYCLE CONVERSION
 - PROGRAMMABLE GAIN AMPLIFIER GAIN = 1, 2, 4, OR 8
 - LOW NOISE: 4 μ Vp-p
 - PROGRAMMABLE DATA RATE: 8SPS to 128SPS
 - INTERNAL SYSTEM CLOCK
 - I2C INTERFACE: address 0x48

Include

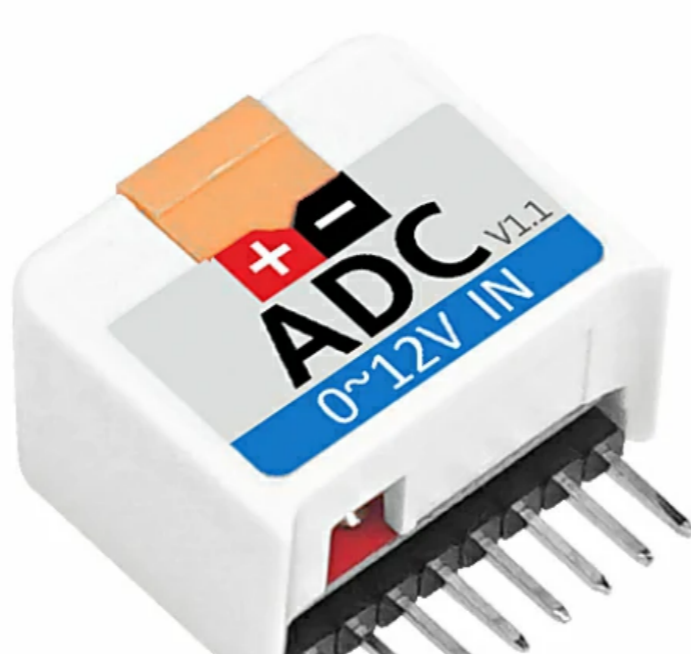
- 1x ADC HAT V11
- 1x 2 Pin 3.96 Pitch Terminal

Applications

- Analog Signal Capture

Specification

Resources	Parameter
Net weight	6g
Gross weight	14g
Product Size	24*25*13mm
Package Size	40*42*30mm





EasyLoader



download EasyLoader

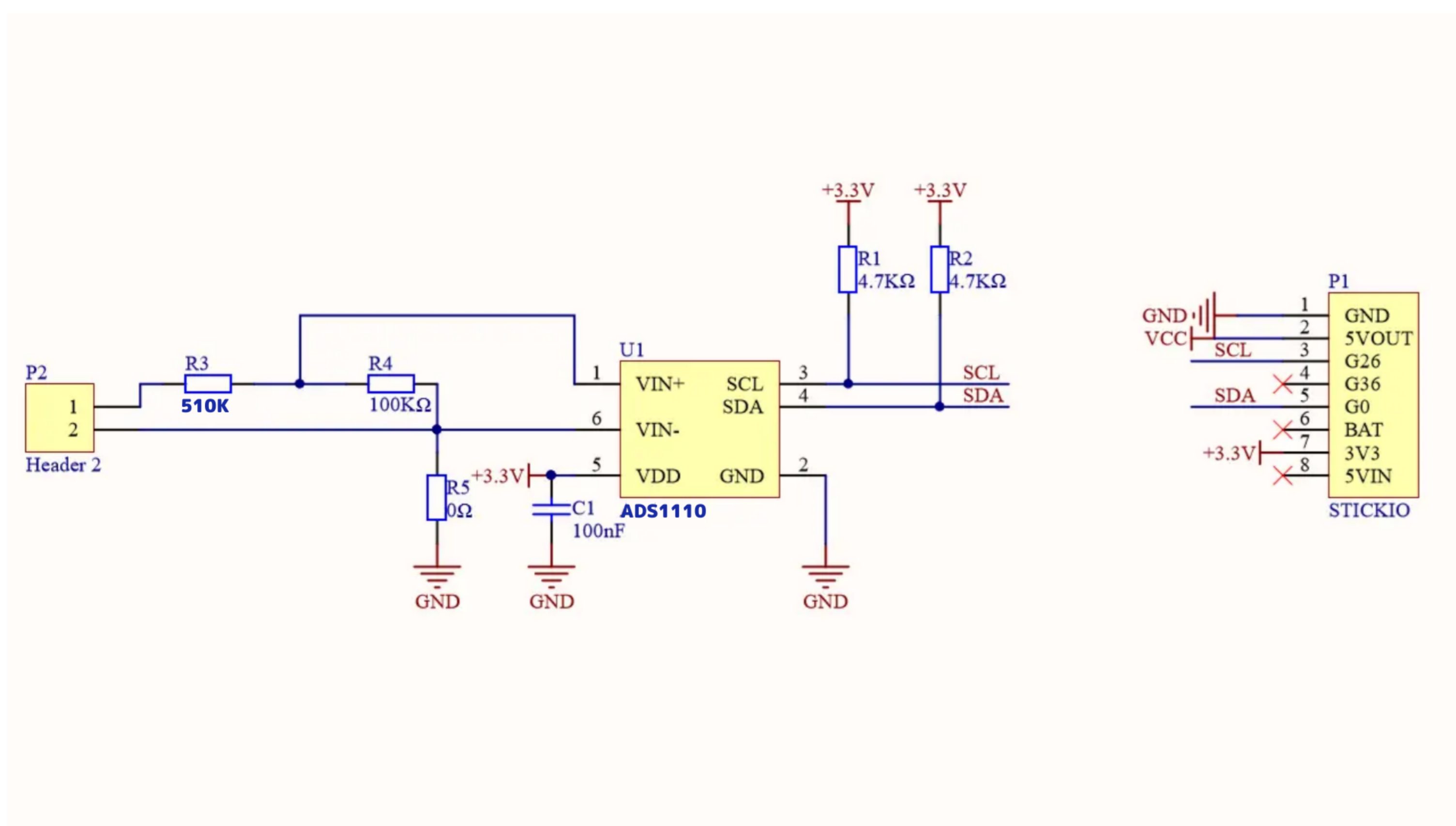
1. EasyLoader is a simple and fast program burner. Every product page in EasyLoader provides a product-related case program. It can be burned to the master through simple steps, and a series of function verification can be performed.

- After downloading the software, double-click to run the application, connect the M5 device to the computer through the data cable, select the port parameters, click "**Burn**" to start burning. (For M5StickC burning, please Set the baud rate to 750000 or 115200)

Pin Map

M5StickC	GPIO0	GPIO26	5V	GND
HAT ADC	SDA	SCL	5V	GND

Schematic



Related Link

- [Datasheet - ADS1110](#)

Example

Arduino

- M5Hat-ADC with M5StickC
- M5Hat-ADC with M5StickCPlus

UIFlow

Open <http://flow.m5stack.com> and Load Demo

