Welcome!

Thank you for purchasing our *AZ-Delivery LM2596S DC to DC Step-Down converter*. On the following pages, you will be introduced to how to use and set-up this handy device.

Have fun!

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Introduction

The LM2596S DC to DC Step-Down converter is a device that converts DC voltages from higher to lower voltages. It is ideal for reducing voltages to the required level.

It is built around LM2596S chip which is a switch−mode power supply regulator, its efficiency is significantly higher in comparison to other popular linear regulators, especially with higher input voltages.

The output voltage is adjustable with a high-precision potentiometer and the load current can be up to 3A.

It is used in a variety of applications such as Step−Down regulator, Pre−regulation for unfiltered power supplies, battery chargers, etc.

This device is of utmost importance when physical computing with Arduino and Raspberry Pi is needed, because all microcontrollers have low limitations for the current at the output pins. Therefore, relays, motors, servos and so on need an external power supply.
For robot cars and similar projects, the controller should be supplied from a battery source. Especially the Raspberry Pi which needs the exact 5V power supply.

Specifications

Operating input voltage	4.5V to 40VDC
Operating output voltage	1.2V to 35V (adjustable)
Output current	2A (constant load)
Switching frequency	150kHz
Low power standby mode	80µ
Load regulation	0.5%
Voltage regulation	2.5%
Storage temperature range	−65 to +150˚C
Dimensions	45x20x15mm [1.8x0.8x0.6in]

The LM2576 device has current limiting to prevent the switch current from exceeding safe values during an accidental overload on the output.

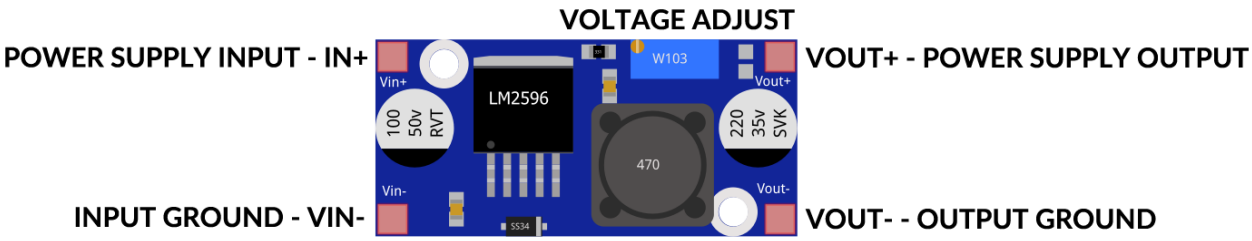
It also has a thermal protection and current limit protection built inside the chip. For further information, please refer to the datasheet.

The current peak under the constant load should not exceed 2A because it may put the regulator under more stress and even damage the regulator.

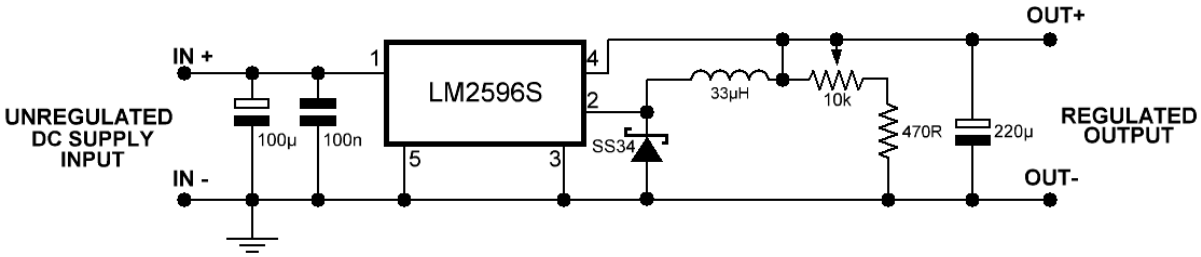
Warning: When connecting the converter module, the input and output must not be reversed, otherwise the module will burn out.

The pinout

The module has four pins. The pinout is shown on the following image:



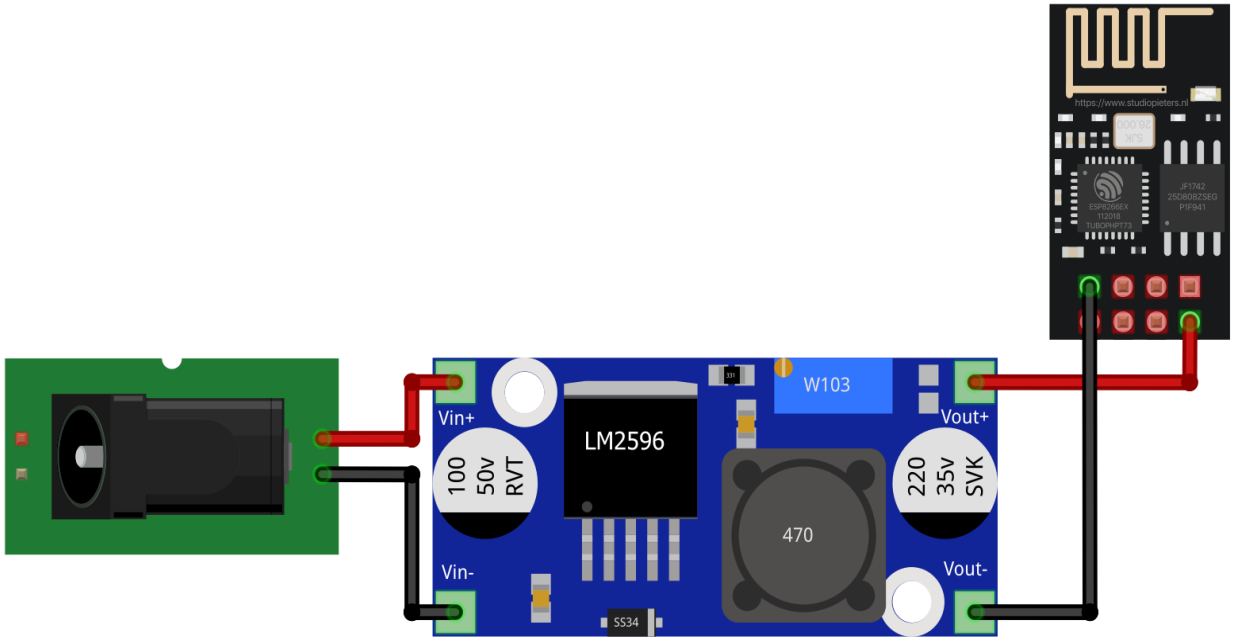
The schematic



The LM2576 regulator is designed to minimize the number of external components. The module is built from a LM2576 voltage regulator, and a few passive parts. It contains two electrolytic capacitors, two tantalum capacitors, one resistor, inductor coil, high-speed switching (Schottky) diode and a precision potentiometer for adjusting the output voltage.

Connection example

The following image is an example of how to connect the module with other devices:



Now it is the time to learn and make your own projects. You can do that with the help of many example scripts and other tutorials, which can be found on the Internet.

If you are looking for the high quality products for Arduino and Raspberry Pi, AZ-Delivery Vertriebs GmbH is the right company to get them from. You will be provided with numerous application examples, full installation guides, eBooks, libraries and assistance from our technical experts.

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Have Fun!

Impressum

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