SKU:DFR0831 (https://www.dfrobot.com/product-2240.html)
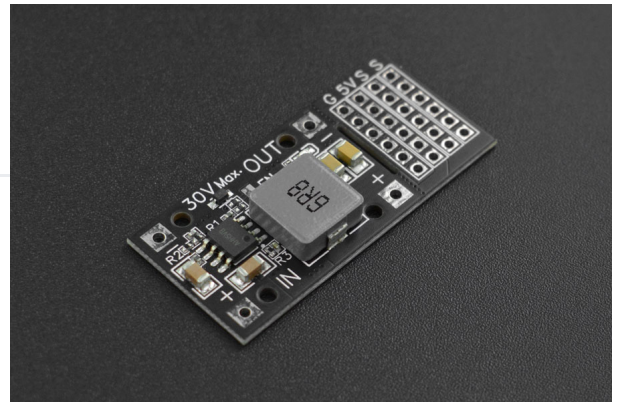
(https://www.dfrobot.com/product-2240.html)

Introduction

This is a 20W DC-DC buck converter power module with 7~24V input and 5V/4A output(Max). The high conversion efficiency and on-board 6 output ports make it suitable for connecting multiple devices like, large current servos, programmable LED strip, etc.

The module integrates durable ceramic chip capacitors of large capacity on the ports and large

inductor that can reduce heat generation. It is ideal for power supply scenarios like mechanical arm, servo robot, and programmable RGB LED strip, etc.
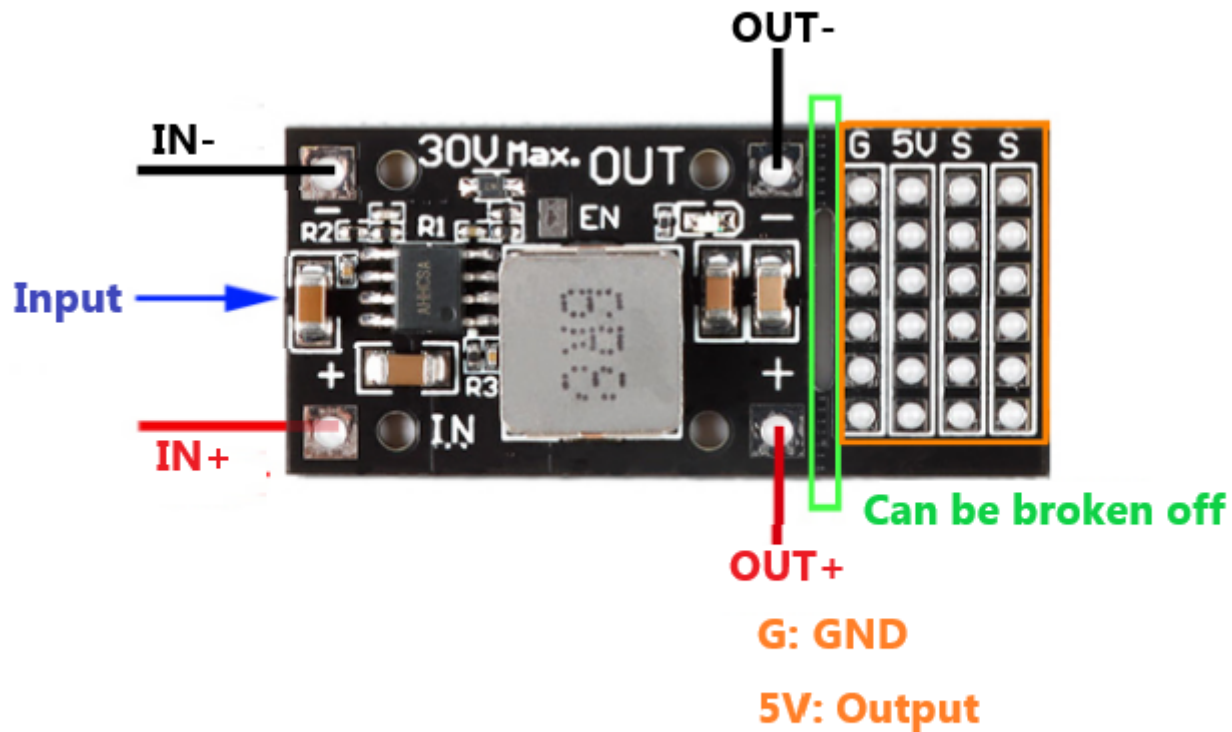
Feature

- Large current output
- High conversion efficiency
- Onboard 6 Outputs for connecting large-current servo, programming LED strip, etc.

Specification

- Input Voltage: 7~24V
- Output Voltage: 5V
- Output Current: 0-4A(Max 5A, heat dissipation is necessary)
- Conversion Efficiency: 90%
- Output Ripple: ＜100mV
- Output Accurancy: ±0.1V
- No-load Current: ＜1mA
- Operating Temperature: -40°~+85°C

- Operating Humidity: 20%~90%
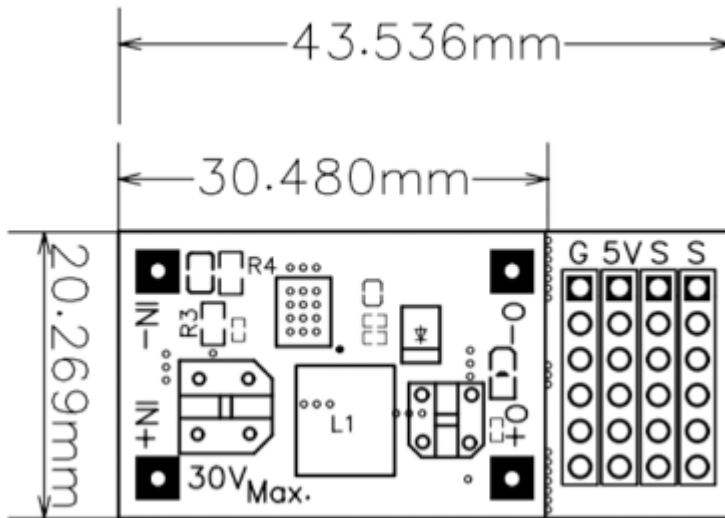
- Dimension: 43.5x20.3x5.5mm / 1.71x0.80x0.22"

Board Overview

OUT-

IN-

Input

IN+

OUT+

G: GND

5V: Output

30V Max. OUT

EN

R2G R1

+

IN

R3

−

+

G 5V S S

Can be broken off

S: Servo Controlling Signal

Num	Label	Description
1	IN-	Input -
2	IN+	Input +
3	OUT-	Output -
4	OUT+	Output +
5	G	GND
6	5V	Output
7	S	Servo controlling signal

Dimension

Tutorial

Requirements

- **Hardware**
  - DFRduino UNO R3 (https://www.dfrobot.com/product-838.html) (or similar) x 1

  - DC-DC Buck Converter Module x1
  - FIT0750 5V RGB Programmable LED Strip x1
  - Servo x1

- **Software**
  - Arduino IDE (https://www.arduino.cc/en/Main/Software)

Connection Diagram

Connecting with 5V RGB LED Strip

Note: The method below only suits the situation that higher brightness is required or multiple LED strip lights need to be cascaded. For low-current modules, there is no need to connect this buck converter since Arduino UNO can directly supply power for them.
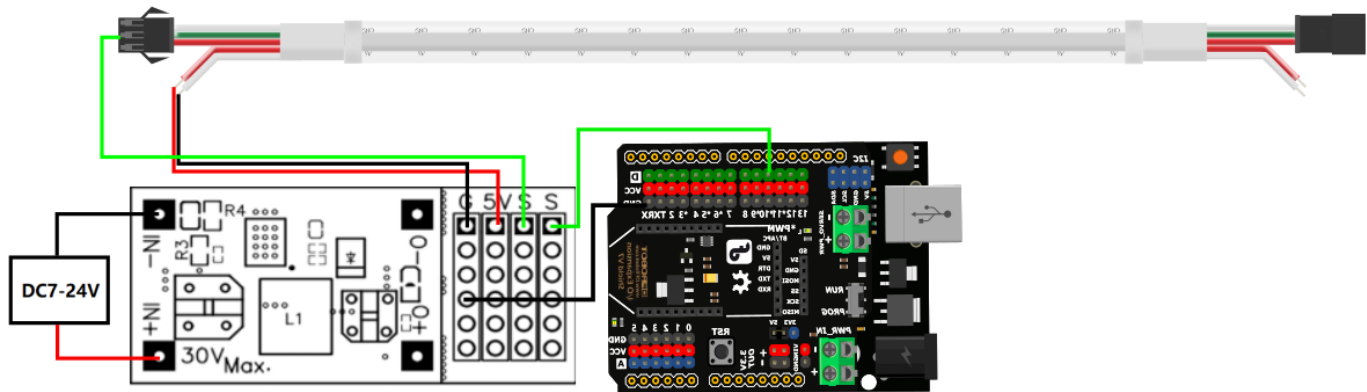
Connecting with servo

Note: The port S of the converter can connects 6 servos.
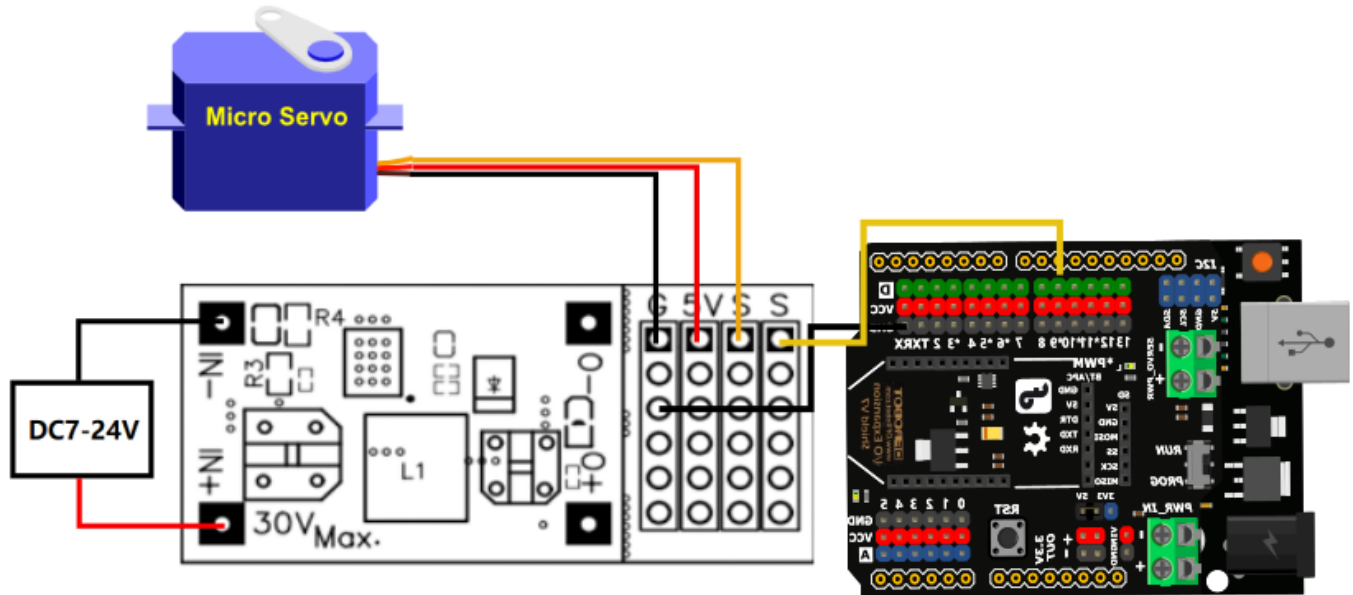
FAQ

For any questions, advice or cool ideas to share, please visit the **DFRobot Forum** (https://www.dfrobot.com/forum/)

More Documents

🛒 Get **DC-DC Buck Converter 7~24V to 5V/4A** (https://www.dfrobot.com/product-203.html) from DFRobot Store or **DFRobot Distributor**. (https://www.dfrobot.com/index.php?route=information/distributorslogo)

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