

3.3V Power Module (AMS1117 Based)

3.3V Low Current Power Module

This power supply module is based on the AMS1117 3.3V regulator and is capable of regulating a wide range of input voltage (4.5 to 12V) down to a fixed **3.3V** output at up to **500mA** ($V_{in} = 4.5V$). Standard 0.1" header pins provide a means of connecting to its input and output terminals.

Package Includes:

AMS1117 3.3V power supply module with input and output pins

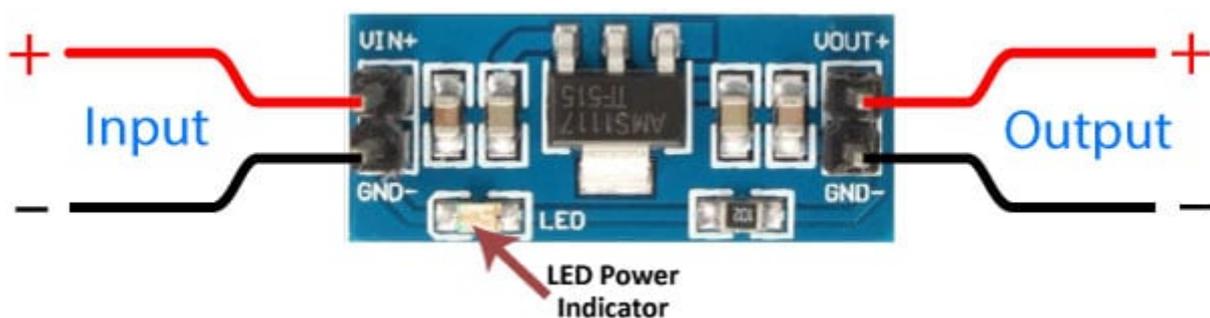
Specifications and Features:

- **Input:** DC 4.5V–12V (input voltage to output voltage must be greater than 1V or more)
- Output:
 - 3.3V, 700mA with additional cooling
 - 500mA output with 4.5V input voltage
 - load current must not exceed 800ma
 - Input-Output use 2-pin single row pin header for easy connection can be directly fixed to the expansion board for experiments.
- **PCB Board Size:** 2.5cm x 1.1cm
- With power indicator light

Features:

- Requires no external components
- Operates Down to 1V Dropout (voltage above output voltage)
- LED indicator indicates power presence
- Easy to use with Perforated boards and Breadboards

Connections:



Design Considerations:

Our AMS1117 3.3V voltage regulator modules are rated at 800mA maximum output current. However, it is a linear regulator, not a switching converter. The module will dissipate a lot of heat if it is asked to handle a higher current with a large voltage drop (difference from Input Voltage to Output Voltage).

This should be considered in your circuit design. The module will not be able to achieve the full 800mA output when the input to output voltage differential is greater than a couple of volts.

Depending on your input voltage, the maximum current available for output will be impacted. The larger the input voltage, the lower the current capabilities.

For example, the graph below illustrates the impact of a larger input voltage as it reduces the overall current capabilities. Using a 4.5v input voltage will allow the regulator module to comfortably supply over 500mA of current, while an 11v input voltage will reduce the available output current to 70mA.

