PROJECT PORTFOLIO

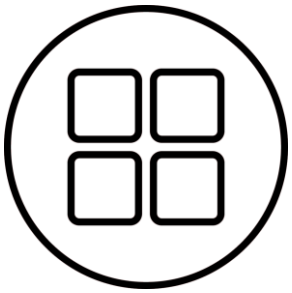
> “Manufacturing is more than just putting parts together. Its coming up with ideas, testing principals and perfecting the engineering as well as final assembly.”

SHUVADIP DAS

HARDWARE ENGINEER

DEBATER || TECH SAVY || SPORTS FREAK ||

TITLE 01 : SAMD21 M0-Mini

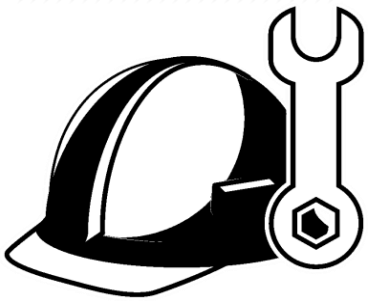


The SAMD21 M0-Mini represents a powerful, 32-bit extension of the Arduino UNO platform, but to small size like Micro or Nano. The board is powered by Atmel's SAMD21 MCU, featuring a 32-bit ARM Cortex® M0 core. Compatible with Arduino M0

OVERVIEW

- Providing increased performance
- Enabling a variety of project opportunities for devices
- Acts as a great educational tool for learning about 32-bit application development
- Understanding schematic view
- Making PCB layout

PURPOSE



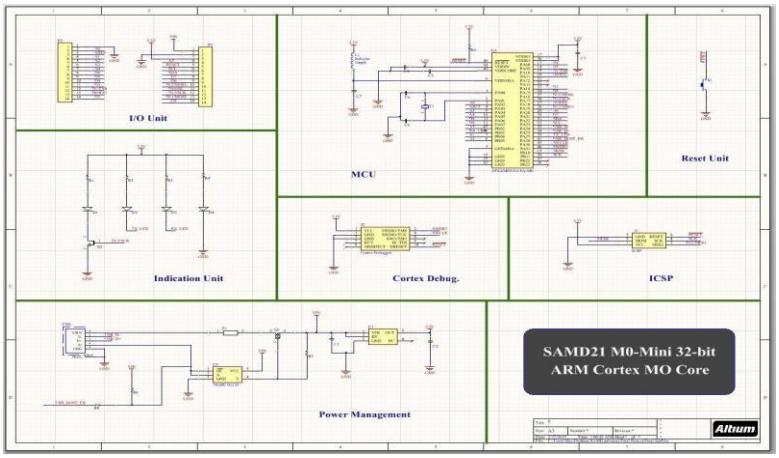
- To research and draft a schematic view
- To check online simulation
- Converting schematic to PCB format

RESPONSIBILITTY

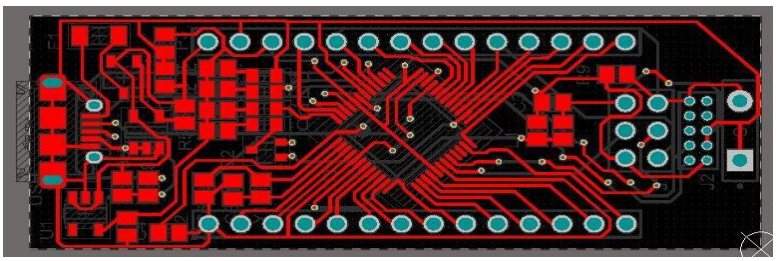
Tools & Technologies

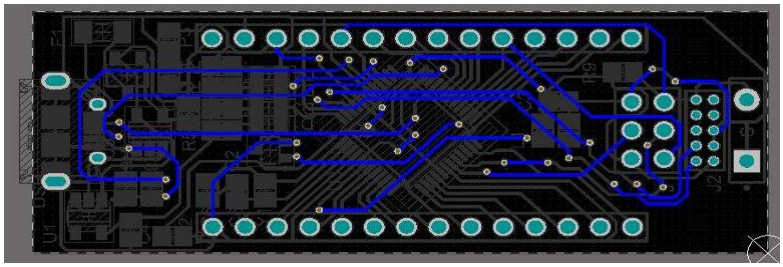
Altium Designer

OUTPUT

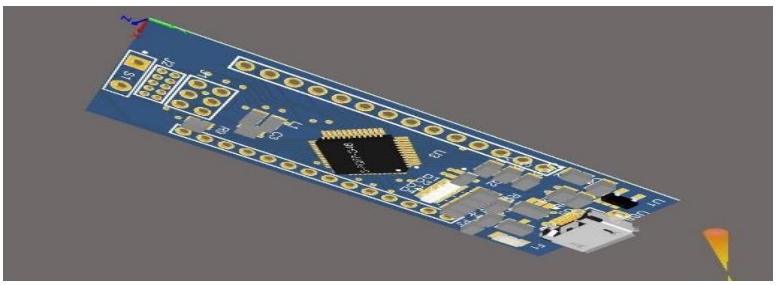


Schematic View





PCB View



3D View

TITLE 02 : Solar Charge Controller

The solar charge controller project is designed to store electrical energy in batteries which is obtained by converting the solar energy into electrical energy with the help of photo-voltaic cells during the daytime and to utilize this stored solar energy during night time

OVERVIEW

- Providing increased performance
- Enabling a variety of project opportunities for devices
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- Making PCB layout

PURPOSE

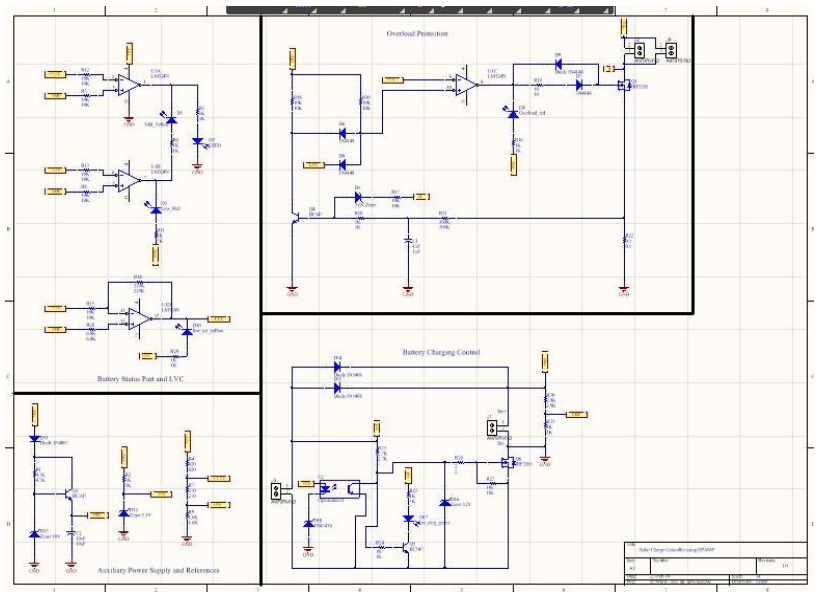
- To research and draft a schematic view
- To check online simulation
- Converting schematic to PCB format

RESPONSIBILITTY

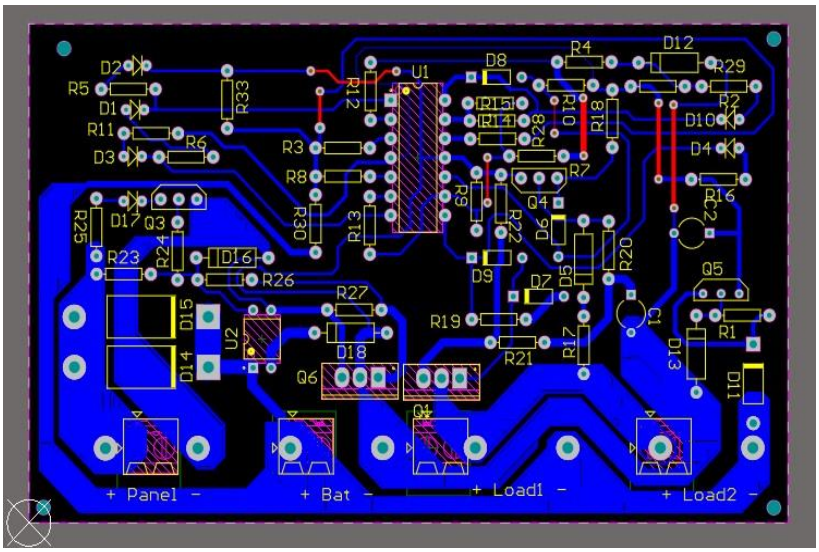
Tools & Technologies

Altium Designer

OUTPUT

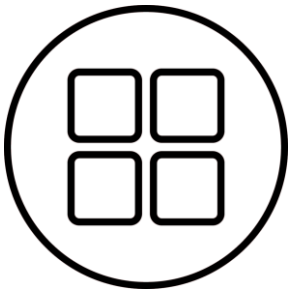


Schematic View



PCB View

TITLE 03 : Atmega2560



The high-performance, low-power Microchip 8-bit AVR RISC-based microcontroller combines 256KB ISP flash memory, 8KB SRAM, 4KB EEPROM, 86 general purpose I/O lines, 32 general purpose working registers, real time counter, six flexible timer/counters with compare modes, PWM, 4 USARTs, byte oriented 2-wire serial interface, 16-channel 10-bit A/D converter, and a JTAG interface for on-chip debugging. The device achieves a throughput of 16 MIPS at 16 MHz and operates between 4.5-5.5 volts.

OVERVIEW

- Acts as a great educational tool for learning about 32-bit application development
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PURPOSE

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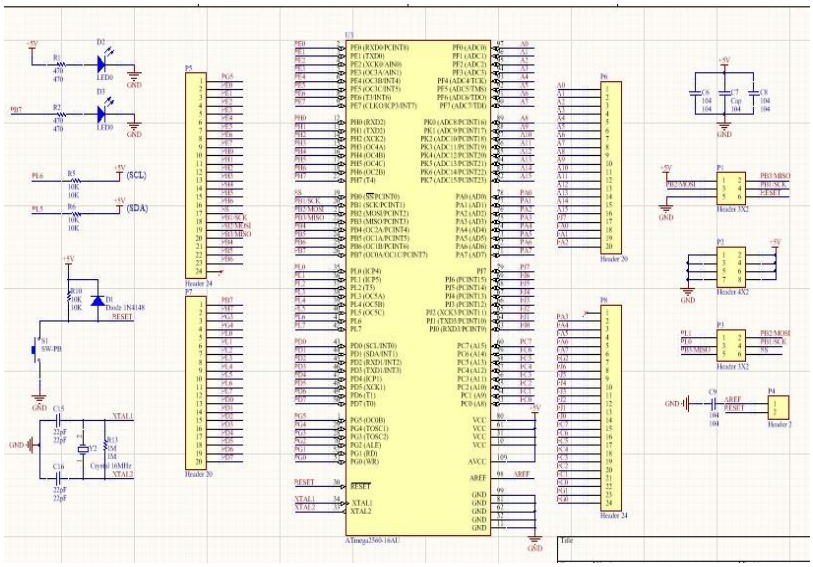
RESPONSIBILITTY

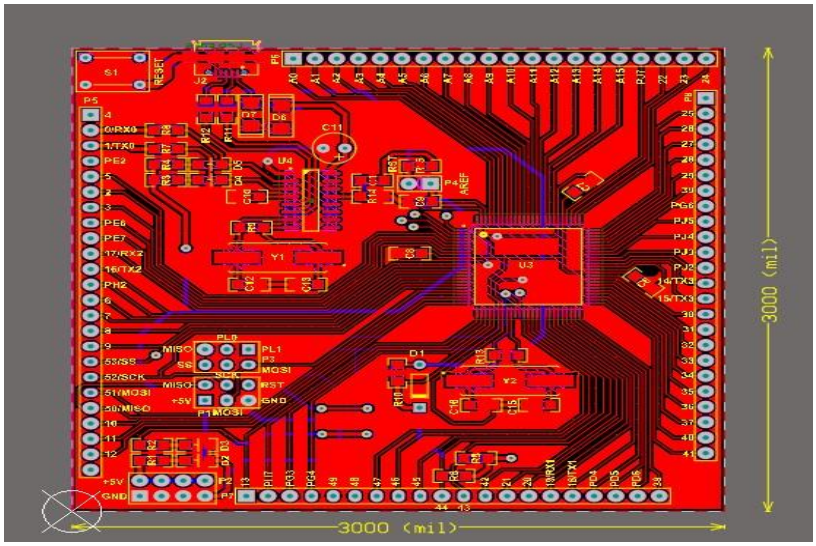
Tools & Technologies

Altium Designer

OUTPUT

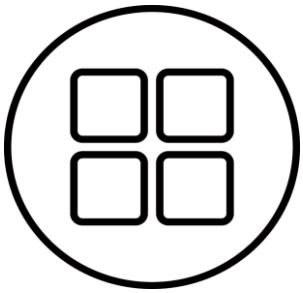


Schematic View



PCB View

TITLE 04 : DC-DC Boost Converter

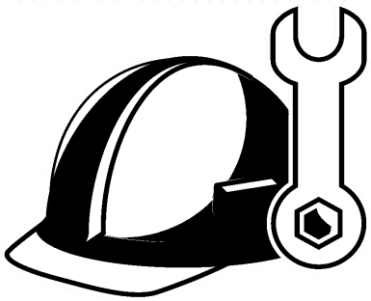


In many technical applications, it is required to convert a set voltage DC source into a variable-voltage DC output. A DC-DC switching converter converts voltage directly from DC to DC and is simply known as a DC Converter. A DC converter is equivalent to an AC transformer with a continuously variable turn's ratio. It can be used to step down or step up a DC voltage source, as a transformer.

OVERVIEW

- To provide an efficient method of taking a given DC voltage supply
- Boosting it to a desired value
- Understanding schematic view
- Making PCB layout

PURPOSE

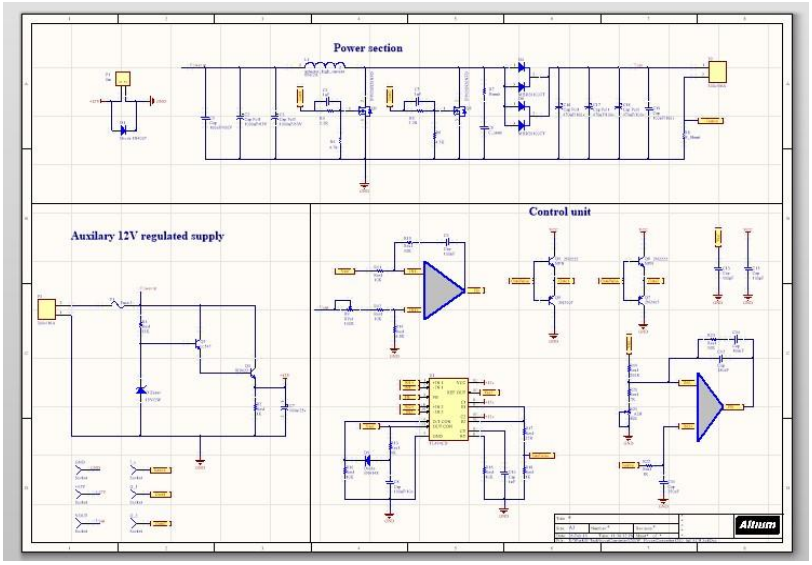


- To research and draft a schematic view
- To check online simulation
- Converting schematic to PCB format

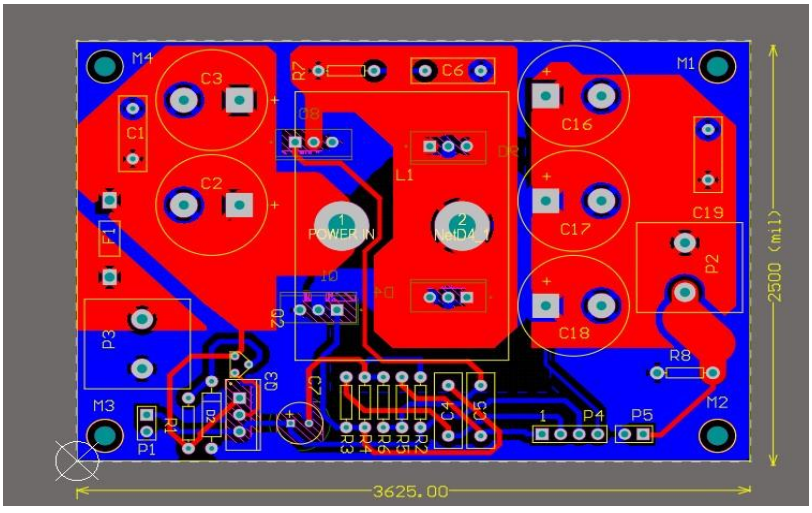
RESPONSIBILITTY

Tools & Technologies — *Altium Designer*

OUTPUT

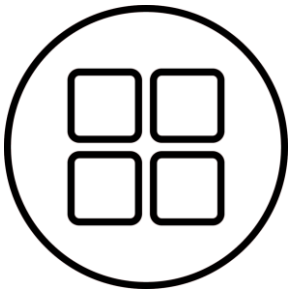


Schematic View



PCB View

TITLE 05 : 5V POWER SUPPLY

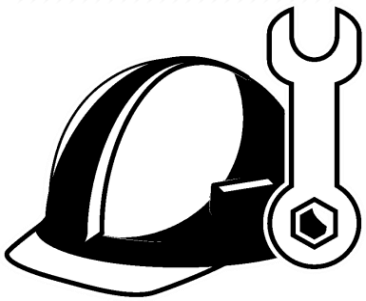


A 5V power supply is necessary component for both household and industrial mini purpose. There is a basic design that can be adjusted to fit many applications. This supply needs to be small so it can be versatile to be applied in many products.

OVERVIEW

- Understanding schematic view
- Making PCB layout
- Producing a real time 3D view

PURPOSE

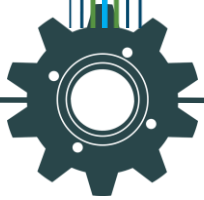


- To research and draft a schematic view
- To check online simulation
- Converting schematic to PCB format
- Producing 3D view

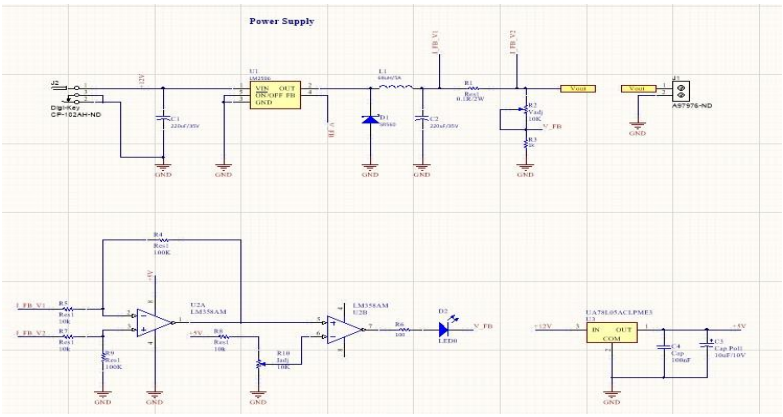
RESPONSIBILITTY

Tools & Technologies

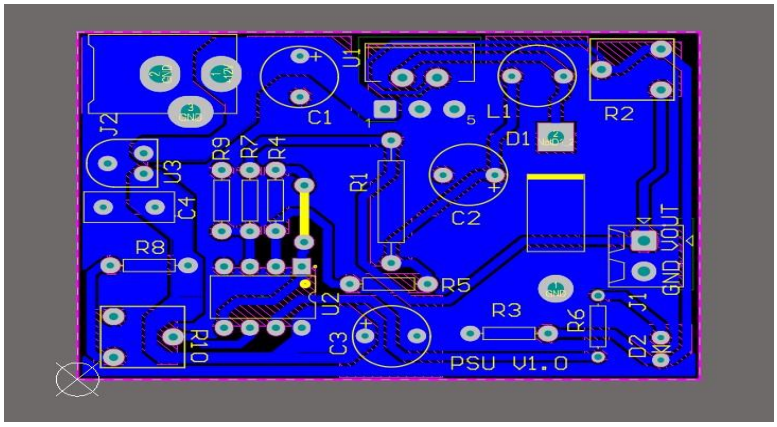
Altium Designer



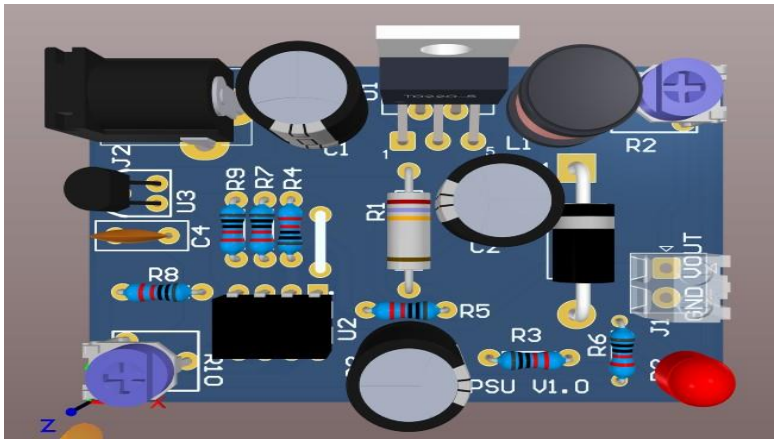
OUTPUT



Schematic View



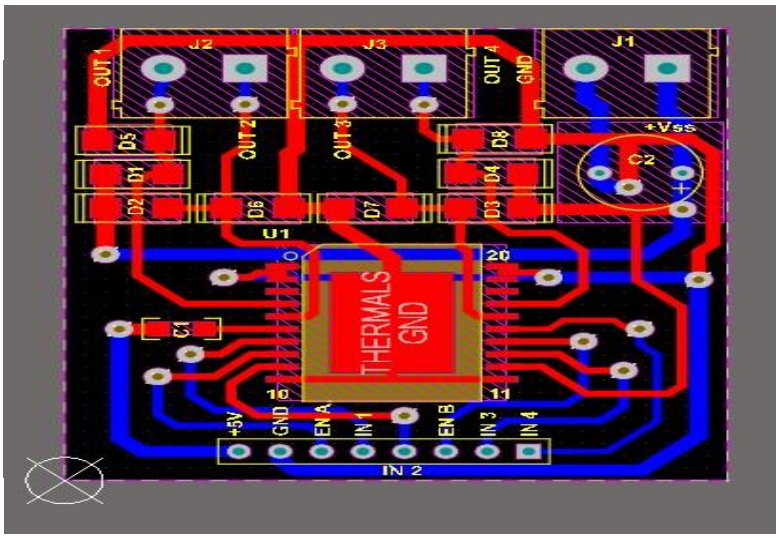
PCB View



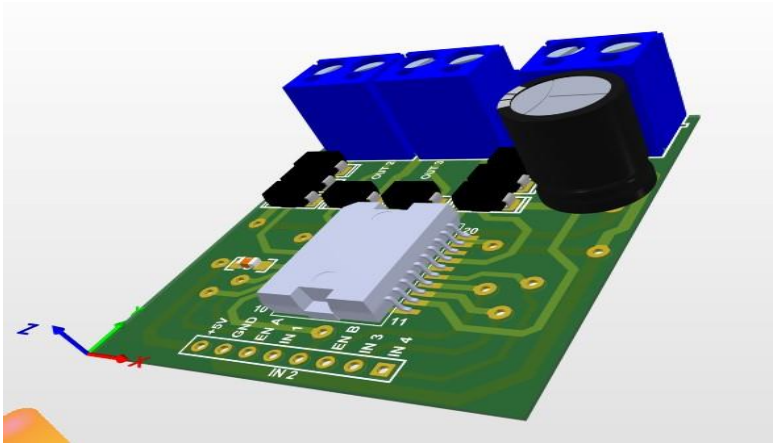
3D View

TITLE 06 : MISCELLANEOUS

L298P Motor Driver 3d

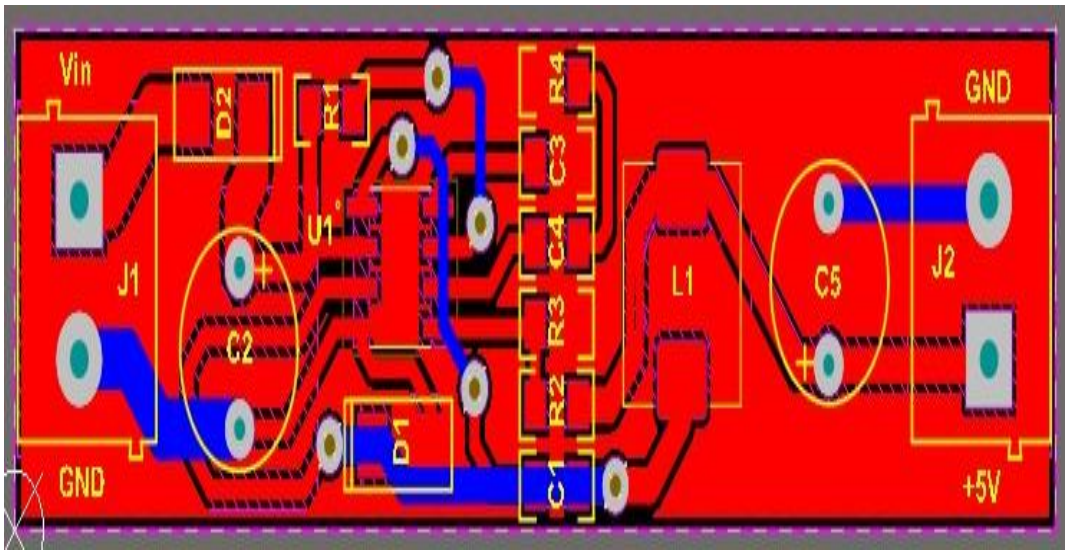


PCB View

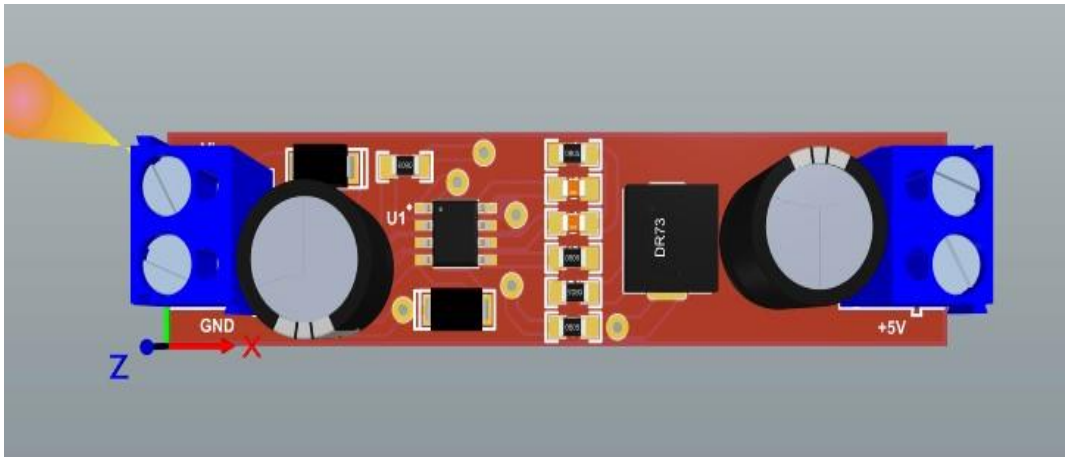


3D View

MP2307 Buck Module 3d



PCB View



3D View