

**DEPARTMENT OF ELECTRICAL ENGINEERING  
UNIVERSITI TEKNOLOGI MARA  
CAWANGAN PULAU PINANG**

**FINAL REPORT OF DIPLOMA PROJECT**

**DUAL SPEED FAN DRIVER FOR HEAT-SINK**

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**FARAH WAHIDA ABD AZIZ (2000111314)  
SITI ROHAIZA HJ ZAINOL (2000540971)**

**EN. MOHD AFFANDI SHAFIE**

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Last but not least...

“World without engineer  
Is a world without control...”

**Zig Ziglar**

## **ABSTRACT**

Final Project is part of our course, structure that needs to be taken to complete our Diploma, by a student that is in the final years. The main propose that all students have to take this course is to give us opportunity to teat our skill and to gather all the knowledge that we have been studying for this few years .From this kind of course ,we can learn the practical way of doing the project such as design , drawing, experimenting, testing and troubleshooting. We also can figure out the best way to improve our knowledge for the purpose of using in the future.

Nowadays, the rapid changes in quality of life require new technologies to fix with us .It is important to design new system that can make everything simpler as possible to operate.

The main function of the project is to control the speed of fan for heat-sink in CPU. Heat is the great killer of PC performance and can damage your processor and other delicate components. An efficient cooling fan can protect your PCs vital parts and boost performance. This circuit will keep the system cool to protect the component in CPU. In practice, this circuit will save current and conserve the energy. Without this device, we need to control the speed of fan manually. It will save a lots of man hour to control the speed. Furthermore, it will prolong the life of cooling fan.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background

For an active heat-sink, the cooling fan continuously rotates at full speed, which is undesirable in many situations. Here is a dual speed fan driver circuit. This system circuit is widely used to control temperature.

In practice, small 12V DC motors with a current consumption of less than 1 ampere are used in active heat-sink assemblies. The rotation speed of these motors can be changed by varying the supply voltage between 6 and 12 volts.

Normally, for an active heat –sink, the cooling fan continuously rotates at full speed, which is undesirable in many situation. Here is a dual speed fan driver circuit to conserve the energy and prolong the life of cooling fan.

This simple project ‘Dual Speed Fan Driver for Heat–Sink’ is acceptable and interesting. This project offers the use of low electricity convenience assumption in order to save the bill that we have to pay every month. It uses only 12 volt electricity.

The system performed to control speed fan automatically. It will be functioning, based on temperature in a CPU. This circuit will be function based on temperature in the CPU which complete with this circuit. When the temperature is high, the speed of fan will rotates with 12 volts supply to cooling the CPU. But if the temperature is low, the speed of fan will rotates with just 6 volt supply.