PLD PROGRAMMER USING PC

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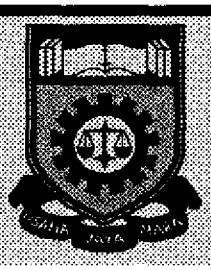

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ABSTRACT

This project explores the hardware and software development for programming of programmable logic ICs. The objective of the project is to design a programmer circuit and develop the software to be able to programme the programmable logic device (PLD) by using personnel computer(PC). In this case EPROM family are selected as a case study. The types of EPROM that has been tested are 27256,27128 and 2764. When the input is given to this circuit, it will be automatically tested using the QBASIC software. Then it will give the result. QBASIC is also used to communicate between the programmer circuit and the PC by using serial data transfer technique.

ACKNOWLEDGMENT

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CHAPTER 1

1.0 INTRODUCTION

1.1 Overview Of PLD

Programmable logic devices (PLDs) are a logic ICs which can be programmed by the user to perform a wide variety of logic functions. A circuit structure in PLDs is usually a rectangular array of identical cells, that can be individually programmed[1].

PLD can be programmed by the user or supplier in the field, either using PROM or EPROM technology. In PROM technology the devices can be used only once. Where EPROM technology is employed the device is erasable and reprogrammable. The machine that is involved to programme the PLDs is called PLD Programmer[2,3].

PLD have four different types. There are PLA(Programmable Logic Array), PAL (Programmable Array Logic), Programmable Logic Element and lastly PGA (Programmable Gate Array). PLA contains a set of AND gates connecting to a set of OR gates. There are selectable link fuse the device inputs into the AND gates and between the AND gates and OR gates so that combinations sum of product expressions can be realized[2].