DEVELOPMENT OF MOTION CONTROLLER INTERFACING CARD

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ABSTRACT

This report describes the development of an interfacing card for the motion controller integrated circuit. A control software written in Visual Basic 5.0 has been developed in order to test the functionality of the interfacing card. The software provides a communication between the interfacing card and a test circuit. The interfacing card has been tested successfully on a simple test circuit, which comprises of 8 LEDs.

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CONTENTS   Page No.

CHAPTER 1

1.0   Introduction

Computer system needs special hardware components between CPU and peripherals to supervise and synchronize all input and output transfer. These components are called interface units because they interface between the processor bus and the peripheral device.

Integrated circuit (ICs) and whatever discrete components are used in designing the interface card are mounted on printed circuit board (PCB). Printed circuit board itself plug into component side edge connector which are mounted on another board called a backplane or known as motherboard [2].

The transfer of data between two units may be performed in parallel or serial. However parallel communication is preferred in most application as it offers faster data transmission.

Parallel communication plays an important role in the designing of the interfacing card module installed in the PC. In parallel data transfer, each bit of the message has its own path. The total message is transmitted at the same time. This means that an n-bit message is transmitted in parallel through separate conductor's paths. Parallel transmission is faster but requires many wires [2]. It is used for short distances and where speed is important.

This project is concerned on the development of an interfacing card for a motion controller integrated circuit.