FPGA-BASED GUI CONTROL USING LCD TOUCH SCREEN

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ABSTRACT

This paper describes a design of FPGA based GUI (Graphical user interface) control system using LCD touch screen. Now a day, many gadgets are using touch screen technology as their prospect to attract user. Touch screen is easy to use and more intuitive of computer interface since it allows user to navigate a system by touching icon or links on the screen without having to use mouse or keyboard. In this project, four application such as turning on LED, displaying instruction on LCD display, seven segment display and showing picture using icon are tested and programmed are written in Hardware Description Language (HDL) and LTM touch screen is used as the command panel.

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CHAPTER 1

INTRODUCTION

1.1   BACKGROUND OF STUDY

Touch Screen technology becomes more popular in recent year. This technology is still widely used in many electronic devices such as smart phone, iPad, tablet computer and game consoles. In medical field and heavy industry, touch screen become more popular because icon or pictures are used as menu driven instead of keyboard or mouse. In the world at fingertips, internet users are exposed every year to a lot of gadgets with touch screen technology. For a new generation, touch screen are more interactive and useful not only for video game activity but in learning process. According to BBC news on 19 April 2013, a touch screen could help children as young as two to learn words and be curious. Moreover, a research from the University of Wisconsin, found that children aged between two and three were more likely to respond to video screens that prompted children to touch them than to a video screen that demanded no interaction. For the feature, touch screen technology give more stylish and elegant life style besides can apply in everywhere and all people need to use this technology such as for the home security, ATM machine, automotive, computer, electronic device and others.