README

Introduction

This is a NIOS II project created by Quartus prime, to simulate a Mega Drive game called Thunder 3 Force. The game will automatically start when run the program on a VGA monitor. This document will guide you for using this project and how to install Quartus on your computer in order to use the game.

Requirement

User will need to install Quartus prime with version 18.1, along with MAX10 and ModelSim, the website for installation is: <https://fpgasoftware.intel.com/?edition=lite>. One thing to note is that Quartus Prime only support Windows and Linux system. If you have an iOS system, you can download a free system booster to switch to Windows system from your device.

You will also need a VGA monitor or a HDMI monitor with VGA to HDMI converter, a simple keyboard, and a DE-10 Lite board with shield.

How To Use

First download the whole project to your local device, open and .QPF file and compile it fully. Then, open the ‘programmer’ and hit run to download the hardware design into your FPGA board.

For the software part, go to eclipse and run the configuration, you will see your screen with a moving background, a plane and two enemy initiated. Then, you can use keyboard, which is connected to the shield, and control the plane to shoot bullets.