Lab 1 Roll Call Machine Operation Manual

Team 05
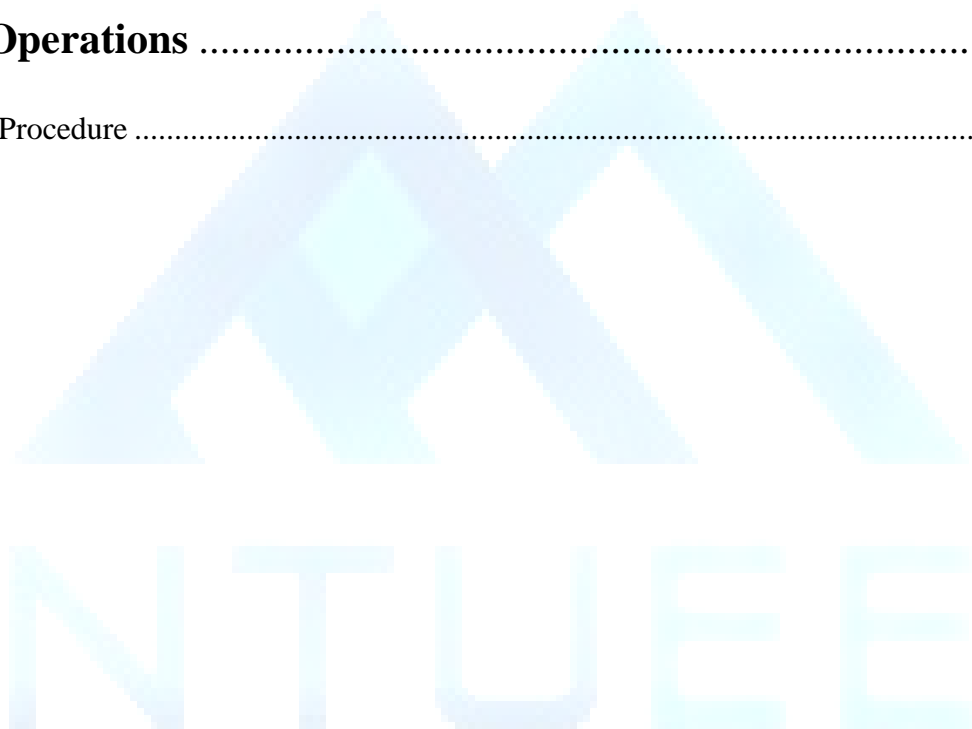
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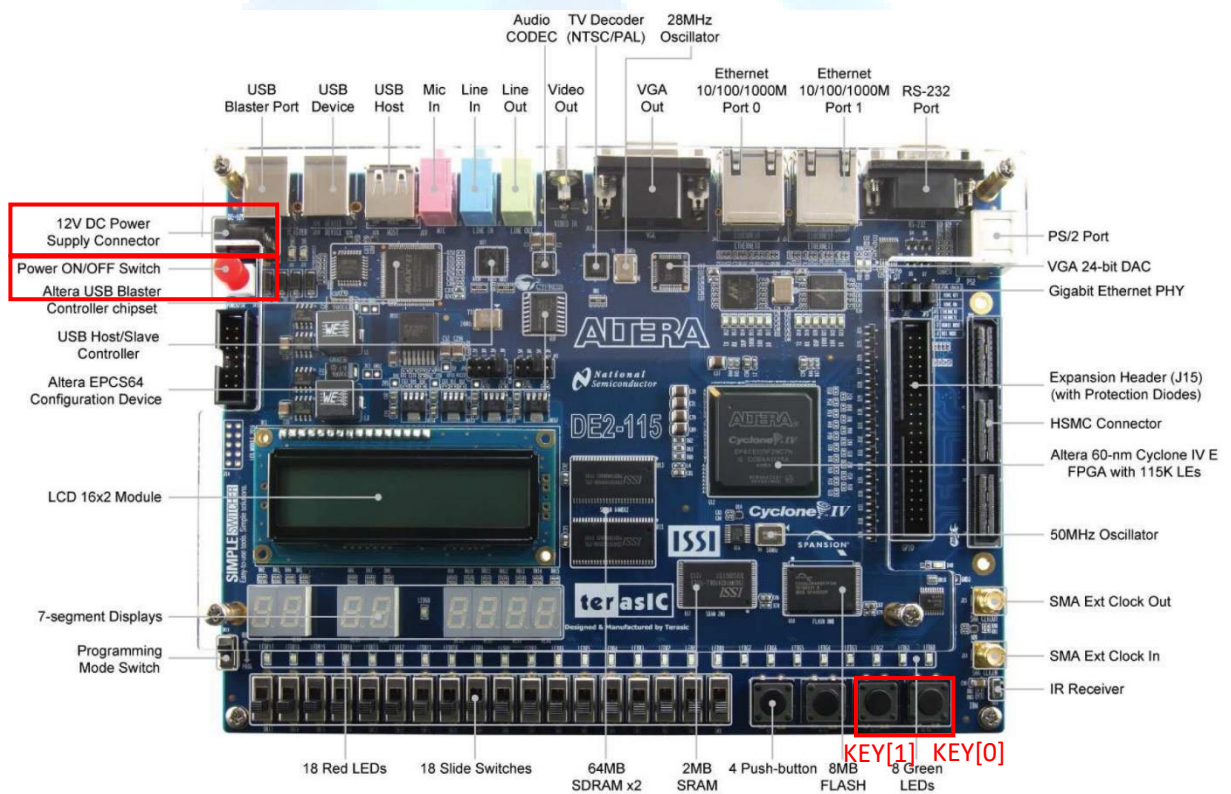
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Contents

1. Introduction

Roll call machine

It is a roll call machine which generates a random number range from 0 to 15 after every operations of pressing the start button. When pressing the start button, the roll call machine will first display different random numbers with the frequency from high to low. In the end, the machine will stop on a number which is the selected number for this roll call.

2. Device

Altera FPGA Cyclone IV DE2_115

Ports

Port name	Pin name	Function
DC power supply		Provide power for FPGA

ON/OFF switch		Switch
KEY[0]	Start	Start the roll call machine to generate a random number
KEY[1]	Reset	Reset the random number to zero

3. Operations

Procedure

Step 1.   Plug power supply line to FPGA.

Step 2.   Press the power switch to turn ON the FPGA.

Step 3.   Press the START (KEY[0]) button.

Step 4.   The machine starts to generate a random number. During the generating process, you can press the START button again, the machine will regenerate a new random number.

Step 5.   Finally, the machine stops on a number. And if you want, you can press the RESET (KEY[1]) to reset the machine.