Αρχιτεκτονική Προηγμένων Υπολογιστών και Επιταχυντών Lab 3 Report

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Chapter 1

Introduction

Lab3 improves on Lab2 by:

- Vectorizing the input/output decreasing the memory accesses
- Storing the input/output to different banks achieving parallelized memory access

Chapter 2

Application changes

To be able to vectorize the pixels correctly we assume that the datawidth is 512 and thus contains 16 integers.

$$\frac{512}{sizeof(int)} = \frac{512}{32} = 16$$

Chapter 3

Zip Contents

- lab3.cpp
  - Final form of lab3's kernel. Run on Vitis.
- tb_lab3.cpp
  - The host which manages the lab3's kernel. Run on Vitis.
- lab3.pdf
  - This report