NOC ROUTER AND ARBITER FOR FPGA

By

Khaled Abdullah Helal Kelany

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfilment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Electronics and Communications Engineering

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Key Words:
NoC; Router; Arbiter; FPGA; Switch

Summary:
The advancement in semiconductor technology has led to a high density chip which moves the bottleneck from the on-chip computation systems to the on-chip communication systems. This advancement gives FPGA a chance to compete with AISC. However, the conventional communication paradigms failed to fulfill the on-chip system needs. Networks-on-Chips (NoCs) are considered a promising solution for on-chip communications challenges. This thesis investigates developing a high performance NoC that targets FPGA.

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Dedication

I dedicate this work for my family, for their endless support.

I dedicate this work for my supervisors, for their sincere guidance.

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