Copper Suicide™ User Manual
Scalable FPGA Development Board

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1 Abstract

Copper Suicide is a scalable FPGA development board based on the Lattice Semiconductor ECP5 FPGA. It consists of an Arm Cortex-M7 processor, 1 configuration FPGA, 8 gigabytes of DDR3 SDRAM, and 16 general purpose FPGAs in a square 2-dimensional architecture. The design is extensible by stacking additional boards on top or bottom.

2 Overview

Copper Suicide is designed to have the most flexibility between interconnections, and the highest data rate. For simplicity of design, all FPGAs have the same schematic, Figure 1 shows the FPGA interconnections. Figure 2 shows the harness wiring bundles.

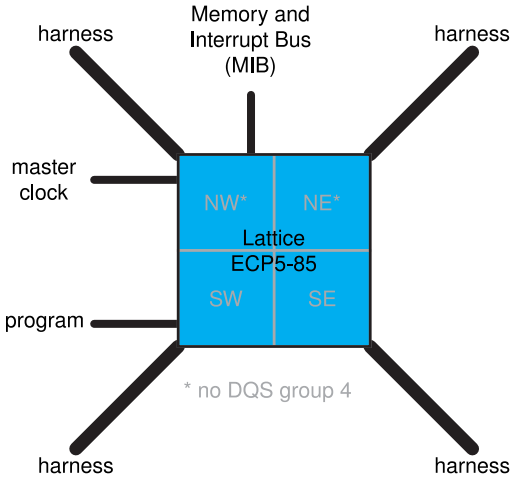

Figure 1: Copper Suicide FPGA

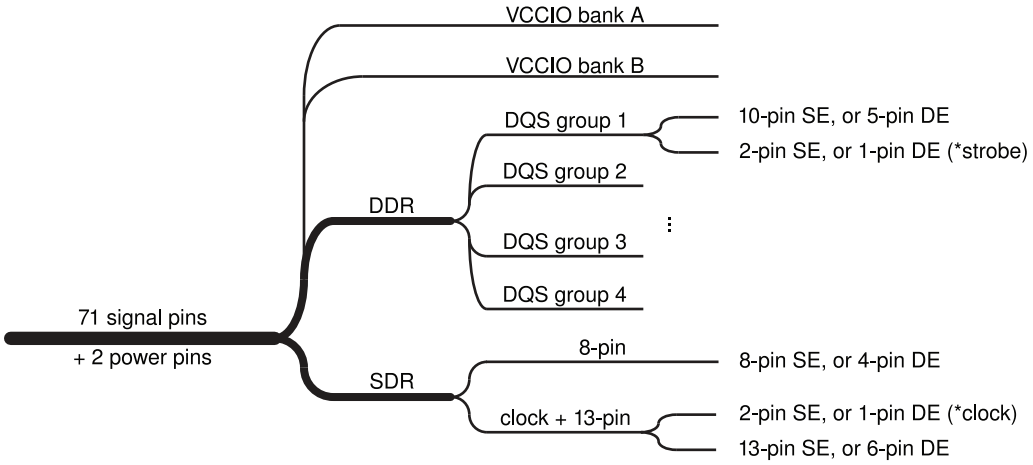

Figure 2: Copper Suicide Harness

The FPGA block diagram, Figure 3, shows all FPGA and ARM connections.

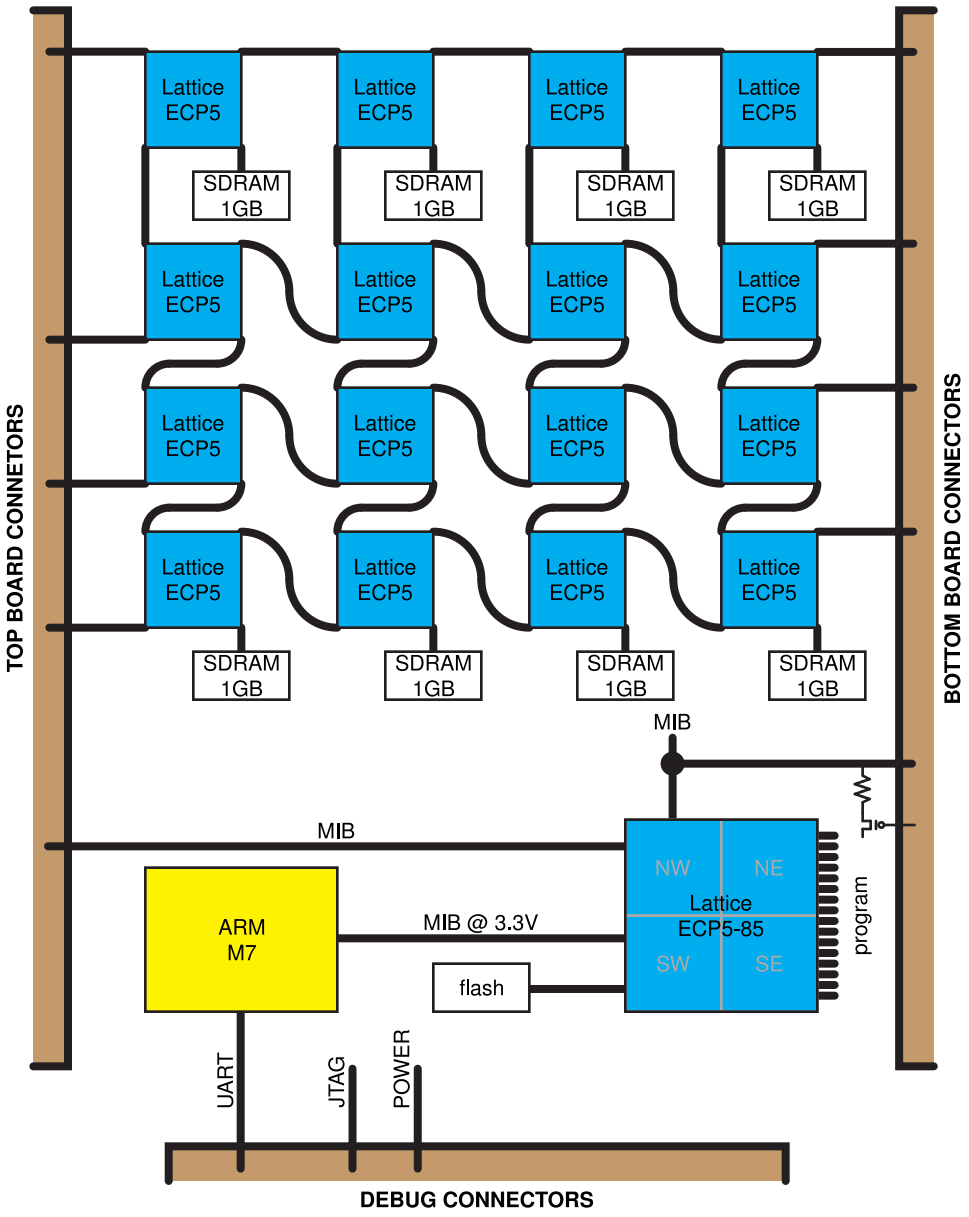

Figure 3: Copper Suicide Block Diagram

3 Pinouts