

Annotation

for the graduate work of Khyzhynskyy Artem Mykolayovich
“System on chip based on MicroBlaze processor core”

Graduate work is devoted to designing system on chip based on the MicroBlaze processor core using the tools for computer-aided design. There are given an overview of existing technology systems for building integrated circuits and the basic features of SoC on FPGA. The main and auxiliary software tools provided by Xilinx for hardware and software platform design based on the MicroBlaze processor core were performed. A description of the steps carried out to develop hardware specification and software project in order to its further implementation on a chip with MicroBlaze core and associated peripheral modules on the example of common in digital signal processing routine - the fast Fourier transform algorithm. Also performed the designed platform test with virtual laboratory instrument package LabVIEW on debugging board of Spartan-6 family Ezkit SP601. This work is recommended for achieving SoC on FPGA designing skills, implemented FFT algorithm can be used as the basis for the problems of digital signal processing.

Total volume of the work: 89 pages, main part – 66 pages, 36 illustrations, 0 table, 1 appendix, 11 bibliographic titles.

List of keywords: system on chip (SoC), programmable logic device (PLD), field programmable gate array (FPGA), complex programmable logic device (CPLD), microprocessor, IP-core, Fast Fourier Transmission (FFT).