

Seminar 1: “Implementation of Embedded Linux in Systems-on-Chip with NIOS II Processor”

**By: Lampa Lab (Department of Design of Electronic Digital
Equipment, Igor Sikorsky Kyiv Polytechnic Institute, Ukraine)**

Description:

- 1) Creating NIOS II based SoC with MMU for latest Linux kernels
- 2) Adding support of DDR3 memory
- 3) Creating custom Linux root filesystem with Buildroot
- 4) Cross compiling Linux kernel
- 5) Writing user programs in C and Python for NIOS II based Linux

Upon completion this seminar, participants will learn how to:

- 1) Run Linux on NIOS II based SoC with MMU
- 2) Set up DDR3 memory controller
- 3) Configure toolchain for cross compilation of Linux kernel and user programs
- 4) Connect to Linux terminal via JTAG or UART

Lecturer: PhD Ievgen Korotkyi, Associate Professor of Department

Approximate duration of the seminar: 90 minutes

Seminar 2: “Quartus II Incremental Compilation and LogicLock Technology”

**By: Digital Lab (Department of Design of Electronic Digital
Equipment, Igor Sikorsky Kyiv Polytechnic Institute, Ukraine)**

Description:

- 1) Definition & overview
- 2) LogicLock regions
- 3) Using Incremental Compilation
 - Design partitions
 - Quartus II tools & interface

- Top-down design flow
- Bottom-up design flow
- Restrictions & limitations

Upon completion this seminar, participants will learn how to:

- 1) Purpose of LogicLock
- 2) Top-down and Bottom-up design technology
- 3) Design Partitions recommendations
- 4) Restrictions and Limitations

Lecturer: O. Antonyuk, Senior Lecturer of Department

Approximate duration of the seminar: 90 minutes

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