

Webinar Introduction to ECP5

A generation of compact, low power and low cost SERializer/DESerializer (SERDES) enhanced field programmable gate arrays (FPGAs) are increasingly being used with application specific integrated circuits (ASICs) and application specific standard products (ASSPs) by equipment designers to rapidly build flexible systems that meet tight cost, power and form factor constraints of many emerging high volume applications.

These SERDES-enhanced FPGAs break the rule that FPGAs must be

- high density
- power hungry
- expensive

having been optimized for

- low cost
- small form factor
- low power consumption

making them ideal for programmable connectivity solutions to complement ASICs and ASSPs.

This LEC2 webinar "Introduction to ECP5" shows the user how devices of the ECP5 series work and how they can be used most effectively. The emphasis of this workshop is put on a basic and wide spread overview over all functions inside the ECP5 FPGAs, e.g.

- PFU
- I/O blocks
- clocking structure

Webinar Objectives:

The ECP5™/ECP5-5G™ family is optimized to deliver high performance features such as an enhanced DSP architecture, high speed SERDES and high speed source synchronous interfaces, in an economical FPGA fabric.

This combination is achieved through advances in device architecture and the use of 40 nm technology making the devices suitable for high-volume, highspeed, and low-cost applications.

The user will learn in this LEC2 webinar:

- Identify the members of the ECP5 Family
- Know the difference between ECP5 and ECP5-5G
- Learn the migration path
- Describe the basic architecture of the ECP5 FPGAs

Agenda

ECP5 Family members

ECP5 Layout

PFU Blocks and Slice

Clocking Resources

General Purpose PLL

sysMEM

sysDSP

Programmable I/O (PIO and PIC)

sysI/O Buffers

SERDES/PCS

On-Chip Oscillator

Device Configuration

Applicable Technologies

- Lattice Semiconductor ECP5/ECP5-5G series FPGAs

Prerequisites

- Basic Knowledge in digital circuit design is welcome.

Format and Duration

- Webinar, 45 min. presentation and 15 min. Q&A

Participant Documents provided

- Presentation
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