



FPGAs & ASICs

Programmation et mise en oeuvre d'électronique programmable

La réalisation de systèmes embarqués combine de plus en plus de l'électronique programmable et du logiciel. Ces deux composantes du système contribuent de façon critique au bon fonctionnement du système et doivent être conçues et maîtrisées non seulement séparément mais également dans leurs interactions. **ac6-formation** propose des formations pratiques pour vous permettre de maîtriser la mise en oeuvre de composants de logique programmable et leur interactions avec la composante logicielle de vos systèmes.

You can see detailed course descriptions of the various trainings by using the above navigation bar. You can also click on course identifiers in the following course briefs hereafter.

Cours principaux

H1 - Lattice Mico32 FPGA embedded processor Implementing and programming a processor core in an FPGA
More and more embedded applications are based on high-capacity FPGA, and integrating software requires installing a processor in the FPGA. However, this architecture has a number of specificities, both in terms of hardware architecture and programming. This training covers the entire process of installing a processor and programming it, either directly or with an embedded OS. The practical exercises will be done on a Lattice Semiconductor FPGA with a Mico32 embedded CPU running micrium uC/OSII or uClinux.

H2 - Lattice Diamond Mastering Diamond for FPGA optimisation and debug
Programming tools for FPGAs are complex environments, supporting many different tasks. It can be difficult to use them optimally and to maximize their usefulness. This course will enable you to master the Lattice Semiconductor Diamond toolset to program, simulate and debug your FPGA either in VHDL, Verilog or in mixing both languages.

H6 - Lattice - PCIe 1.1 x1, x4 IP core This course describes the implementation of the Lattice PCIe core present in ECP2M, ECP3 and SCM FPGA families

HX1 - Xilinx - Virtex-5 FXT Embedded Processor Block This course covers the parameterizing of the Embedded Processor Block present in Virtex-5 FXT Xilinx FPGAs.

HX2 - Xilinx - Spartan-6 / Virtex-6 Integrated PCI Express Block This course covers the implementation of the Xilinx PCIe block.

HX3 - Xilinx - Designing with Ethernet MAC logicores This course covers the implementation of the Ethernet MAC Xilinx logicores.

HX4 - Xilinx - Microblaze implementation This course explains how to design a SoC based on Microblaze and Xilinx or proprietary IPs using EDK

V1 - Le langage VHDL Programmation de FPGAs en VHDL

V2 - Design with SystemC System Design and Simulation with SystemC

Embedded electronic systems are more and more complex and designing them more difficult. Thus designing the hardware and the software separately becomes quite impractical. The SystemC language has been designed to design and simulate entire systems, both the hardware and software parts, even before its partitioning.

VHX - Xilinx - FPGA Programming in VHDL This course explains how to design with VHDL on Xilinx FPGAs using ISE Design Suite
Virtex-6, Spartan-6, Microblaze, EDK, VHDL, ISE, Xilinx, FPGA

Autres cours

C7 - UML-RT UML et SysML pour l'ingénierie système et le temps réel



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