

## Overview

As SoC and embedded system are getting bigger and complex, system-wide verification is one of key aspects to get first silicon success. The system-wide verification requires fast-enough simulation performance and easily-adaptable prototyping platform. iNTUITION is a unique virtual FPGA prototyping platform along with simulation acceleration.

iNTUITION's simulation acceleration feature comes from a straightforward connection between the software running on the host computer and the Design Under Verification (DUV) in the FPGA. iNTUITION's virtual FPGA prototyping platform consists of large capacitance FPGA and various peripherals such as RS-232, USB, Ethernet, memories, and TFT LCD.

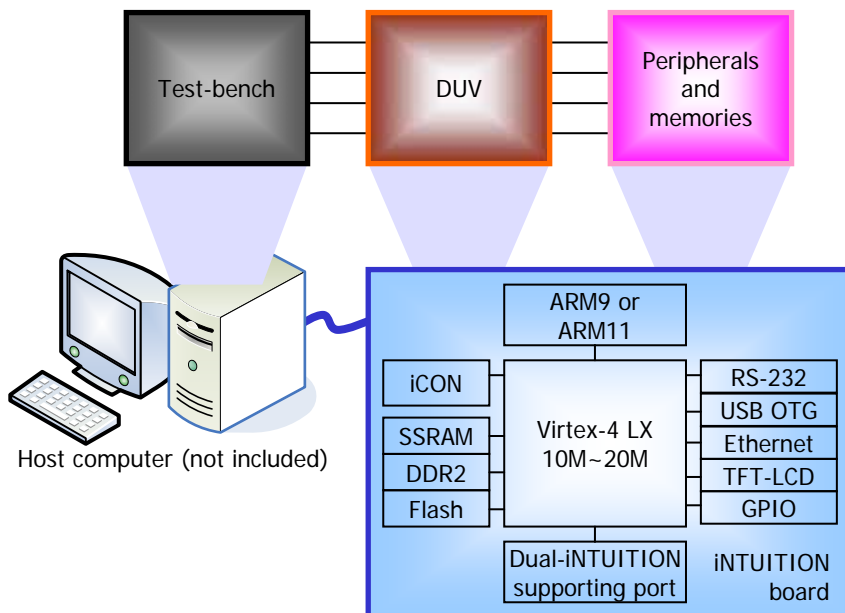
## iNTUITION Features

### Hardware

- Xilinx Virtex 4 LX multi-million FPGA mounted
- BILA for hardware debugging
- Wider external interface
- On-the-fly reconfiguration through USB
- Network port available
- ARM9 and ARM11 support
- Dual-iNTUITION support

### Develop Software

- Windows device driver
- Various APIs for C/C++ and Verilog/VHDL co-simulation or testing
- FPGA netlist builder for Xilinx
- Supporting transaction-based verification modes



## iNTUITION packages

- iNTUITION-basic package
  - Multi-million FPGA board
  - iNSPIRE: integrated development environment for iNTUITION
- iNTUITION-ARM/AMBA supporting package
  - ARM9 or ARM11
  - AMBA bus components
  - AMBA bus system builder
  - Virtual-platform builder
- iNTUITION-RTOS supporting package
  - Windows CE and others

# Overall Specification

Host PC	
OS	Windows 2000/XP
Host interfacing	
High-speed serial	USB 2.0
FPGA supporting	
FPGA	Virtex 4
Capacity	10M or 20M gates per board; 40M gates for dual-board
BILA (Built-In Logic Analyzer)	
Nets and ports	Up to 300
External connection	
Pin Count	around 300 pins
Processor, peripherals and memories	
Processor	ARM9, ARM11
Peripherals	RS-232, USB OTG Phy, Ethernet Phy, TFT-LCD, PS/2, Audio, Bluetooth
Memories	SSRAM (32-bit wide, 2MByte), DDR2 (64-bit wide, 512MByte), Flash, SD/MMC card
3rd party tools supported	
C/C++ compiler	Visual C++; Borland C; GNU GCC; ARM ADS
P&R tools	Xilinx ISE
Waveform viewer	VCD file readable waveform viewer such as UT, SignalScan and GTKWave
HDL simulator	Most HDL simulators, such as ModelSim, NC-Sim and VCS.
HDL synthesizer	Most HDL synthesizers <ul style="list-style-type: none"> <li>• Synopsys : Design Compiler with FPGA Compiler / FPGA Compiler II</li> <li>• Synplicity : Synplify, Synplify Pro</li> <li>• Mentor Graphics : LeonardoSpectrum</li> </ul>

Note: Peripheral controller blocks are not included, but sample designs are available on request

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