



# Virtex-4™ ML401 Evaluation Platform

The Low-Cost, Full-Featured FPGA Development System

Today's shrinking budgets and design cycles have made evaluating, designing, and testing complex systems more challenging than ever before.

Xilinx provides the answer with the Virtex-4 ML401 Evaluation Platform. Powered by the 4VLX25 device and supported by industry-standard peripherals, connectors, and interfaces, the Virtex-4 ML401 Evaluation Platform provides a rich feature set that spans a wide range of applications.

Xilinx also provides expert guidance to designers in the form of hardware-verified reference designs, application notes, user-friendly tools, and development boards. When combined with the Virtex-4 FPGA's extensive silicon capability, this comprehensive support enables designers to implement robust systems quickly and easily.



## The Ideal Platform to Evaluate and Implement Your FPGA Design

### Leverage the ML401 Board's Rich Feature Set

- Support for multiple clock sources and differential clock inputs
- Memory interfaces for DDR SDRAM, ZBT SRAM, and Linear Flash
- Multiple FPGA configuration modes: Platform Flash, System ACE CF, Linear Flash, and Parallel Cable-IV
- Audio and video interfaces
- Multiple user interfaces: dual PS/2, IIC Bus, RS-232, USB, and Tri-Mode Ethernet
- High-speed expansion module interface supporting single-ended and LVDS I/O standards

### Optimize Your Design with Unique Built-In Silicon Features

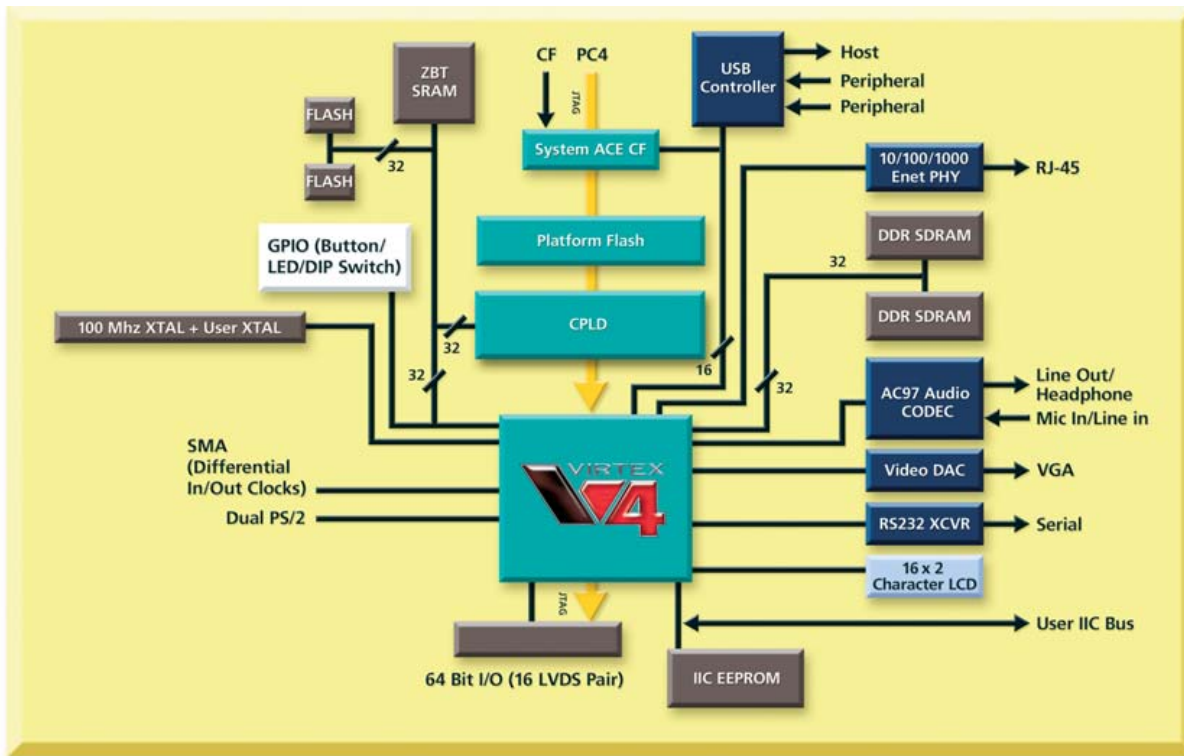
- ChipSync™ source-synchronous technology embedded in every I/O ensures reliable data capture
- Xesium™ differential global clocks minimize skew and jitter for increased design margins

### Finish Faster Using Proven Reference Designs

- Reference designs and IP cores for numerous applications speed up your design cycle
- A comprehensive suite of application notes guide you every step of the way
- Demonstrations ship in Platform Flash, Linear Flash, and System ACE CF

## Virtex-4 ML401 Evaluation Platform Features

- Xilinx Devices
  - XC4VLX25-FF668-10C
  - XC95144XL
  - XCCACE (System ACE™ CF)
  - XCF32P (Platform Flash)
- Clocks
  - 100 MHz Oscillator
  - Extra Clock Socket
- Memory
  - 64 MB DDR SDRAM
  - 1 MB ZBT SRAM
  - 32 MB Compact Flash
  - 8 MB Flash
  - 4 kb IIC EEPROM
  - 32 Mb Platform Flash
- Display
  - 16x2 Character LCD
- Connectors and Interfaces
  - 4 SMA Connectors (Differential Clocks)
  - 2 PS/2 Connectors (Keyboard/Mouse)
  - LVDS Personality Module
- 4 Audio (Line In, Line Out, Microphone, Head Phone)
- RS-232 Serial Port
- 3 USB (Host and 2 Peripherals)
- Parallel Cable-IV Header
- DB15 VGA Display
- RJ-45 Ethernet Port



## Additional Tools and Services

- Xilinx Integrated Software Environment (ISE)
- Xilinx Embedded Development Kit (EDK)
- ChipScope™ Pro – Debug, analyze and verify your design in real time
- IP Center – Comprehensive suite of verified IP cores
- Education Services – Increase your skill set and reduce your time-to-knowledge

## Take the Next Step

Order your ML401 Evaluation Platform today and get a head start on your design. For more information about the Virtex-4 FPGA family visit [www.xilinx.com/virtex4](http://www.xilinx.com/virtex4)



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