

# Xilinx Programmable Logic Design Solutions

## Version 2.1i



Designing the Industry's  
First 2 Million Gate FPGA



Drop-In 64 Bit / 66 MHz  
PCI Design

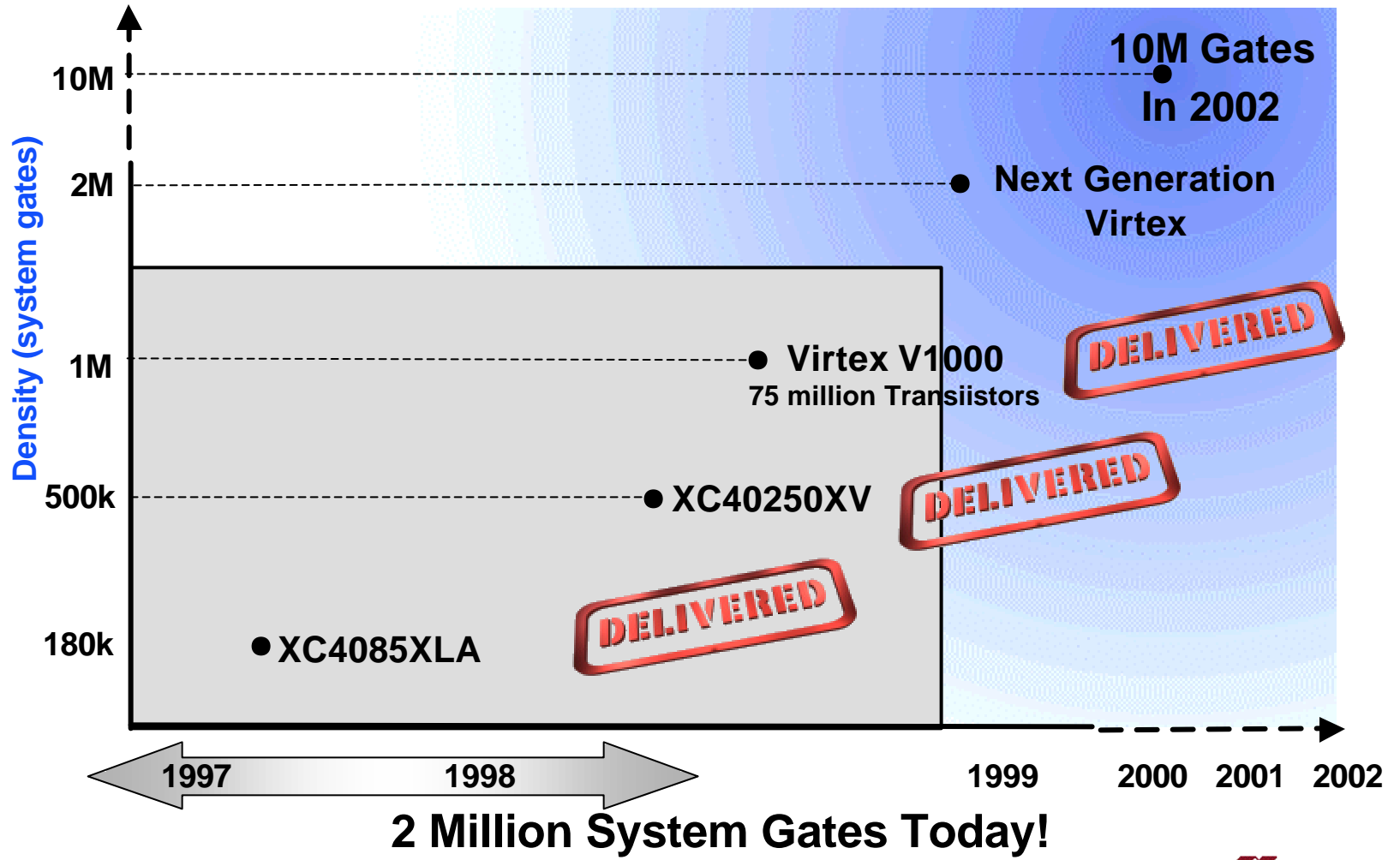
# State of the Art Programmable Logic Design



- ◆ Industry's fastest compilation times
- ◆ Industry's highest performance
- ◆ Industry's best support for High-Level design flows
  - HDL design
  - Design re-use / Cores
  - Robust functional and timing verification
  - Internet enabled design
- ◆ Support for the industry's largest FPGAs
- ◆ Products configured to meet your design needs



# Density Leadership





# Software Leadership

**DELIVERED**

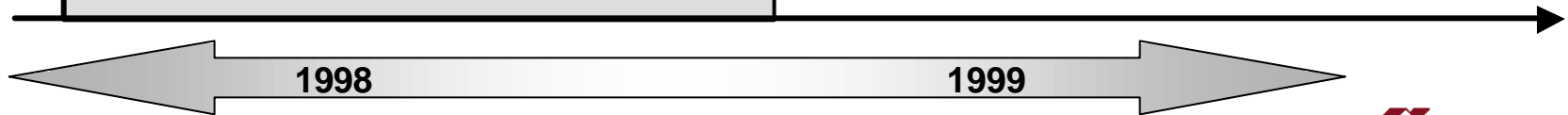
**DELIVERED**

**v1.5i** Ease Of Use

- ✓ Push Button Design
- ✓ Minimum Delay Reporting
- ✓ Voltage/Temperature Prorating
- ✓ Floorplanning

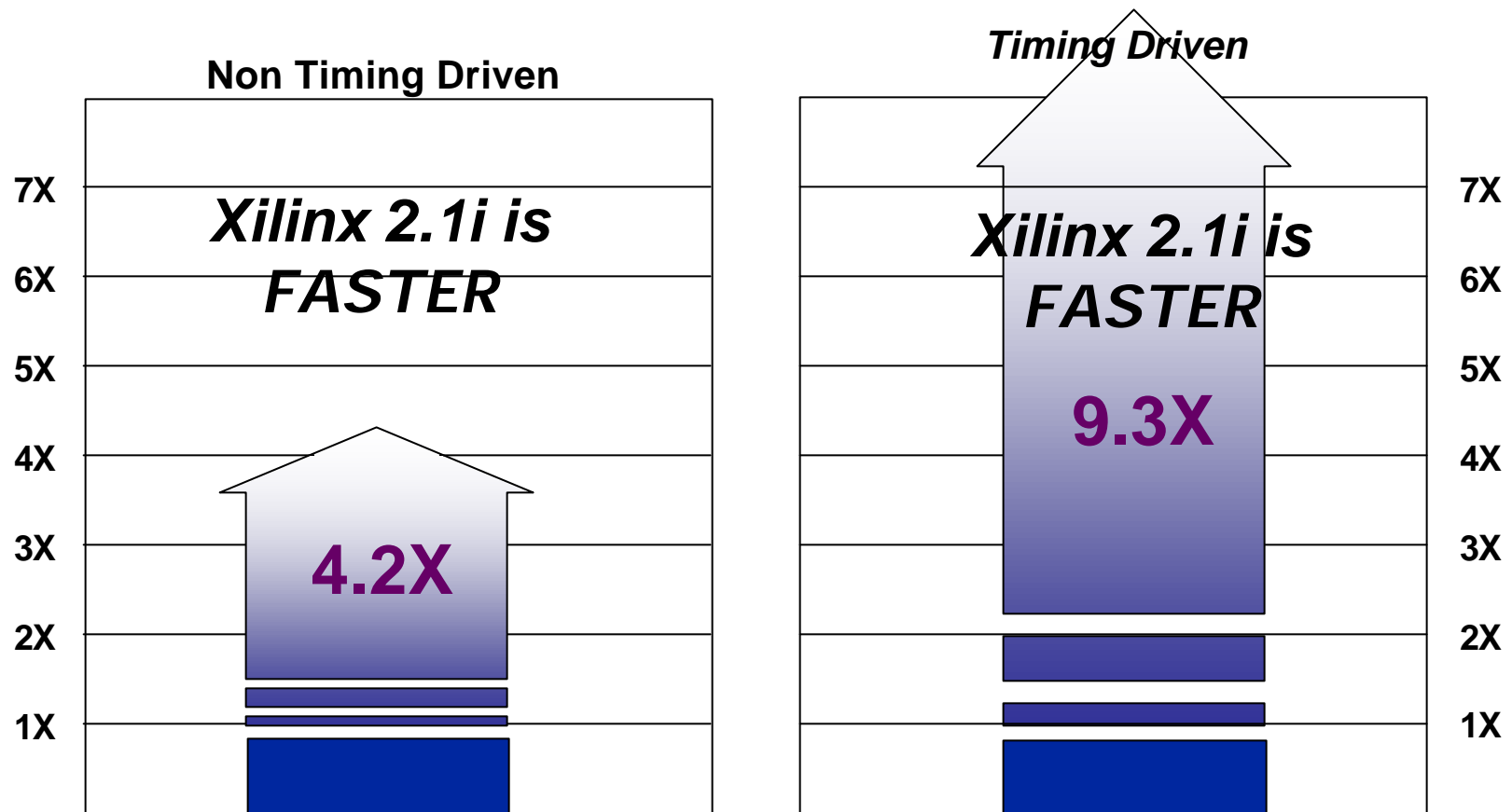
**v2.1i** Internet Enabled Software

- ✓ Internet Team Design
- ✓ 2 Million Gate support
- ✓ 100K Gates < 1 minute
- ✓ Embedded Core Generator
- ✓ Drop-In 64 bit / 66 MHz PCI



# Benchmark Results

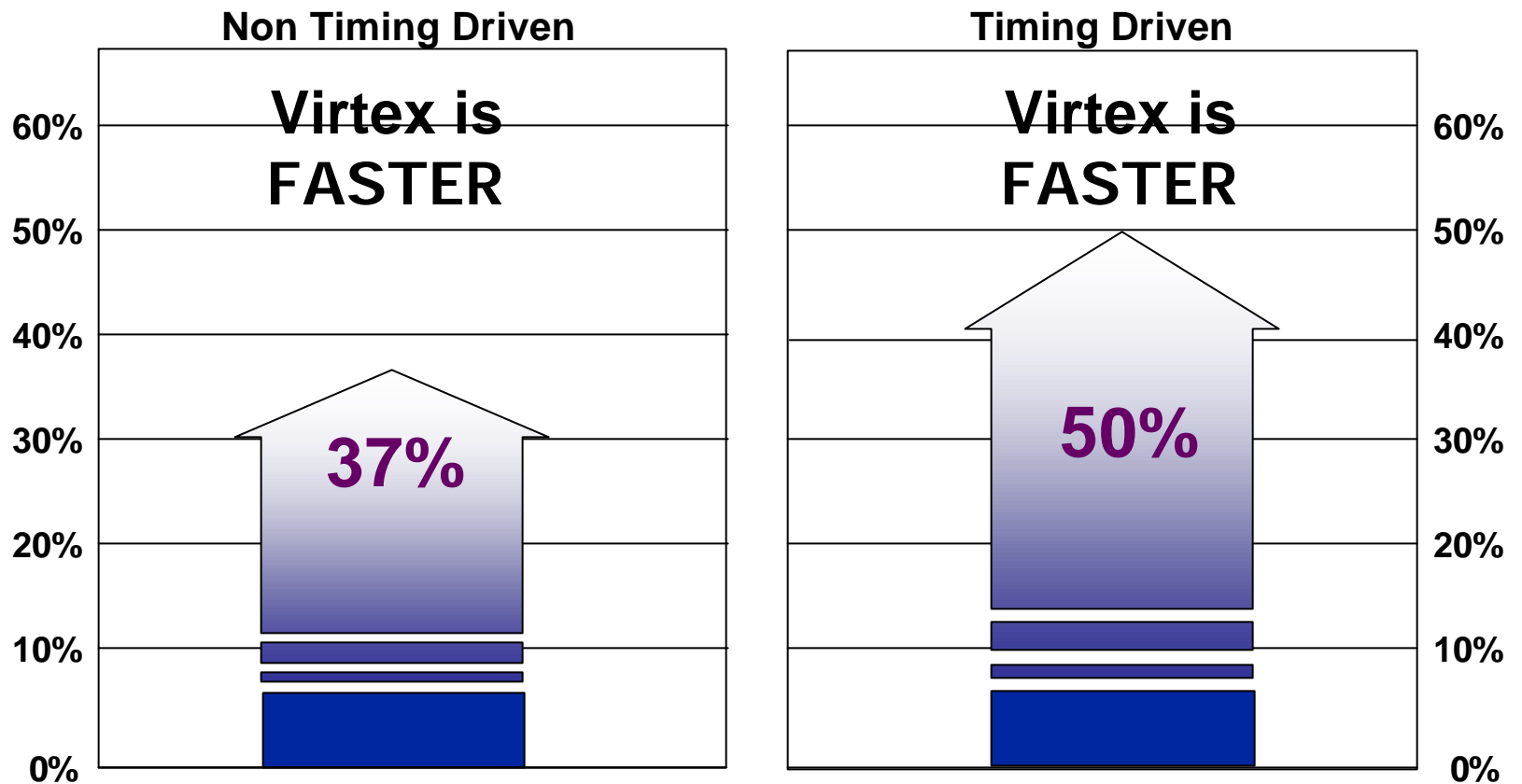
## Virtex vs. 10KE Compilation Time



- Benchmarks are comparing Virtex -6 with 10KE-1 using Alliance version 2.1i vs. MAX+PLUS2 9.1
- Design suite consists of 22 HDL customer designs ranging from XCV50-XCV600

# Benchmark Results

## Virtex vs. 10KE Performance



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# Internet Team Design

## Solves 21st Century Design Challenges

Design Team  
Leader

### *The Problem*

- ◆ Million+ Gate Designs
- ◆ Variety of Flows
- ◆ Remote Location of Designers
- ◆ Design Revision Management

### *The Solution*

- ◆ Communication
- ◆ Coordination
- ◆ Integration

Schematic  
Engineer

VHDL  
Engineer

Verilog  
Engineer

Core  
Engineer

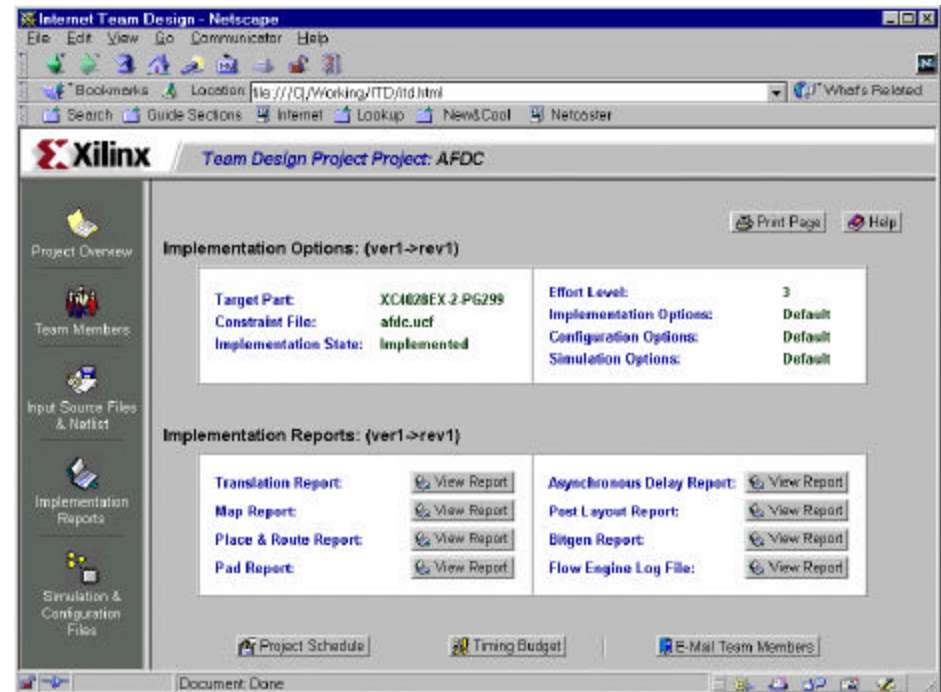


# Internet Team Design Product Description

A web-based facility to coordinate and manage team-based design projects

Key features include:

- ◆ Facilitates project schedule, assignments and communication among team members
- ◆ Coordination of input source and netlist files from multiple designers
- ◆ Provides access to implementation reports, timing simulation and configuration files

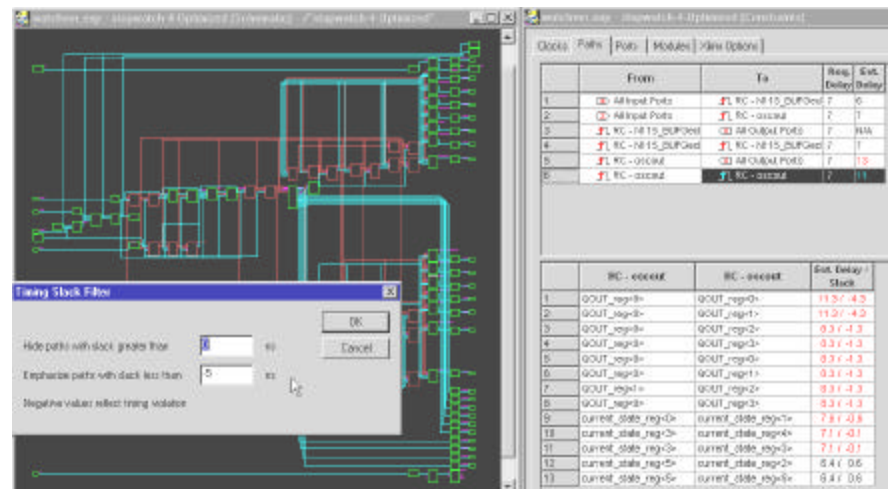




# Synopsys FPGA Express™ 3.2

- ◆ Push-Button HDL Performance:

- Advanced synthesis delivers faster clock speeds, and more efficient utilization



- ◆ Powerful HDL design:

- TCL scripting enables ASIC - style design flow
- Advanced Analysis features simplify design debugging:
  - Integrated Schematic Viewing and Static Timing Analysis (VISTA™)
  - Consistent signal naming

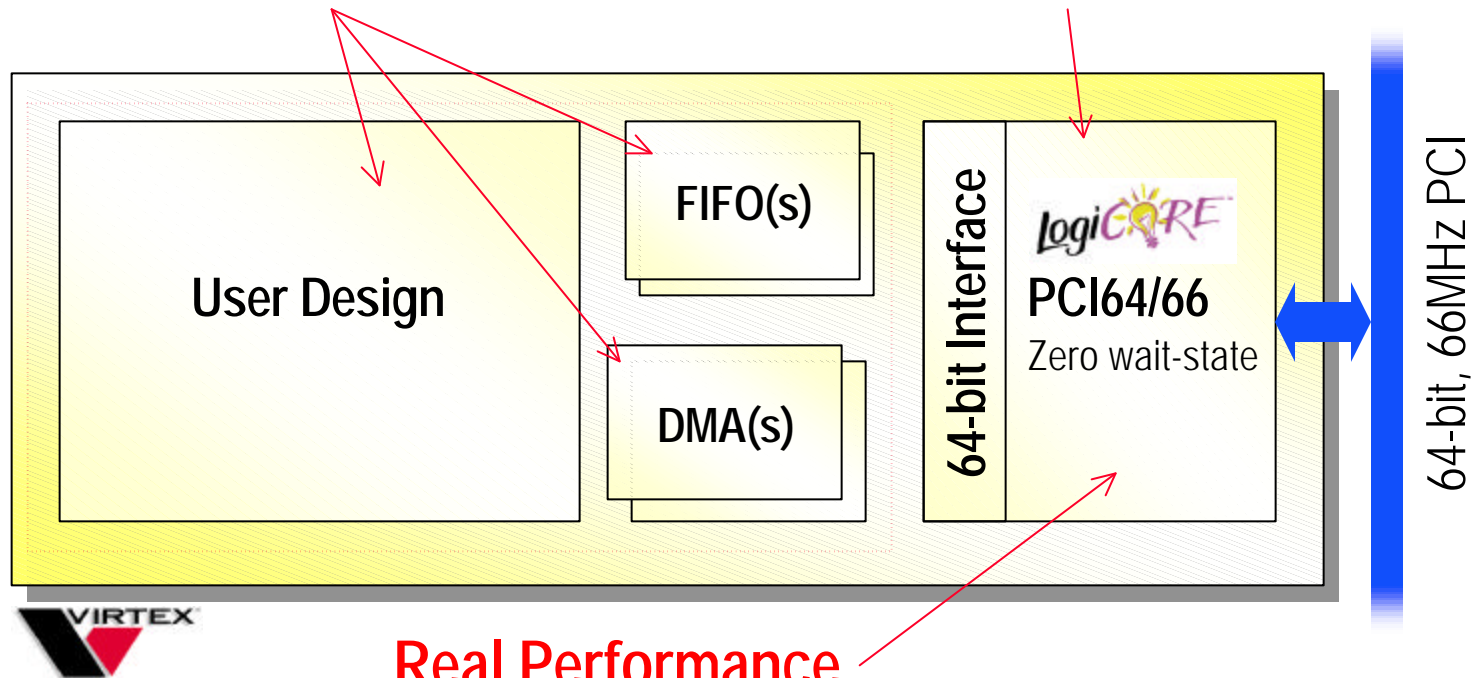
# The Real 64/66 PCI

## Real Flexibility

- ◆ Uses standard Virtex FPGA
- ◆ Back-end de-coupled from core

## Real Compliance

- ◆ PCI v2.2 Initiator and Target
- ◆ Guaranteed timing



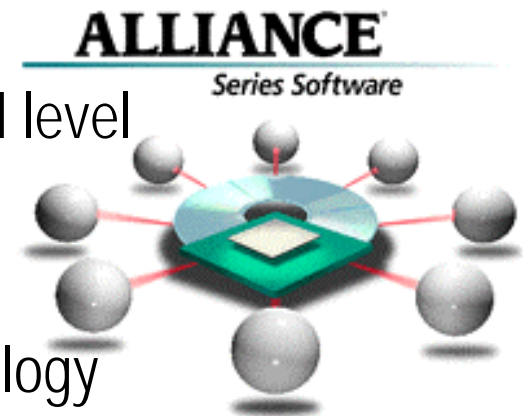
## Real Performance

- ◆ Compliant zero wait-state at 66MHz
- ◆ Full 64-bit data path

# Xilinx Alliance Series

## Programmable Logic Design Tools Integrated Into Your EDA Environment

- ◆ Robust support for the complexities of multi-million gate FPGA design
  - High performance synthesis
  - Advanced design analysis through board level verification
    - STAMP and LMG models
- ◆ Industry's first Internet Team Design methodology
- ◆ Productivity enhancements speed system level design
  - Dramatic compile time improvements
  - Extensive IP
  - Design timing and layout analysis tools



# Xilinx Foundation Series

A Complete, Ready to Use Programmable Logic Design Environment

- ◆ Easy to use, mixed-level design environment
  - Industry's fastest compilation times
  - Embedded core generation tool
  - Industry's most comprehensive on-line support
- ◆ Powerful, mixed-language synthesis from Synopsys<sup>R</sup>
- ◆ Drop-In PCI design
  - 64 bit / 66 MHz Virtex "Real PCI"
  - 32 bit / 33 MHz SpartanXL PCI



**FOUNDATION**  
Series Software

