



VERSATILE FPGA PLATFORM
FOR UNIVERSITY CLASSROOM
AND RESEARCH ENVIRONMENTS

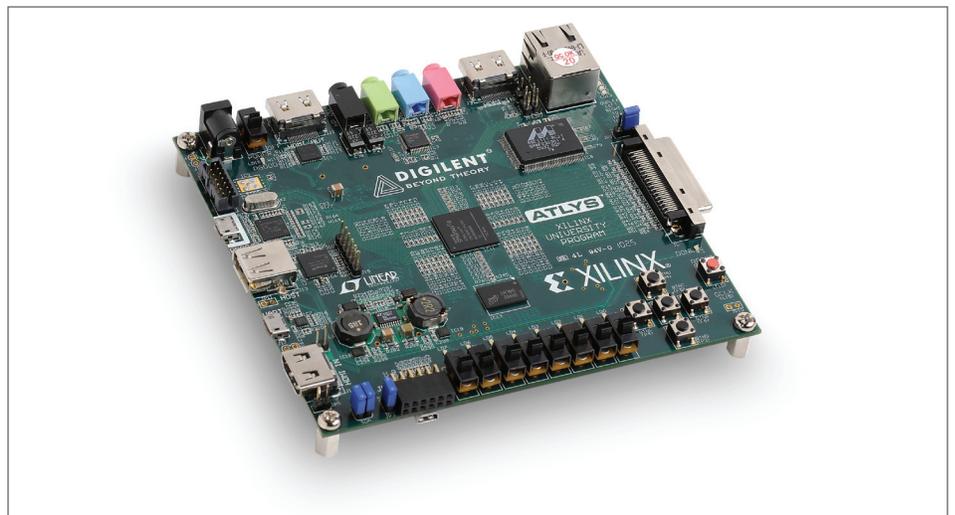
CONNECTIVITY AND EMBEDDED PROCESSING
POWER FOR DIGITAL LOGIC DESIGNS, DSP, VIDEO
AND IMAGE PROCESSING

› The Challenges of Getting Started

- Selecting the right combination of features for the academic environment
- Tailoring hardware to the curriculum
- High costs for custom board fabrication
- Keeping hardware and associated curriculum up to date

› Xilinx University Program Development Kits

- High-density functional design, based on industry-leading Xilinx Spartan®-6 FPGA
- Fully supported with a complete software environment (Xilinx ISE® Design Suite: System Edition)
- Part of a complete set of teaching materials that are regularly updated
- Professor workshops available to speed up adoption



Atlys Spartan-6 Academic Development Kit

The Xilinx® Atlys Development Kit is an ideal platform for courses and research that span the curriculum from digital logic to embedded processing and DSP, including video, image processing, and other applications. To power today's high-definition video, the kit includes a board with four HD multimedia interface (HDMI) ports and a high-performance memory controller block (MCB). A memory-management unit (MMU)-enabled version of Linux, running on the Microblaze soft core processor, takes advantage of the on-board peripheral interface for a complete embedded processing environment.

The Atlys board is based on a high-capacity Xilinx Spartan™-6 FPGA, and includes the circuits and devices that enable advanced digital system designs. The on-board high-speed DDR2 memory, HDMI ports, Gigabit Ethernet, and advanced clocking and power supply circuits make the kit an exceptional value. The platform's leading-edge technology includes:

- Spartan-6 XC6SLX45 FPGA
- 6,822 Spartan-6 logic slices
- 43,661 Spartan-6 logic cells
- Integrated Memory Controller Block (MCB)
- 2,088 Kbits of block RAM
- 58 DSP48A1 slices

Development Kit Highlights

Kit Contents

- Atlys board, manufactured by Digilent
- Universal power supply
- USB cable

On-Board Memory

- 128 MByte DDR2
- 16 MByte quad SPI flash

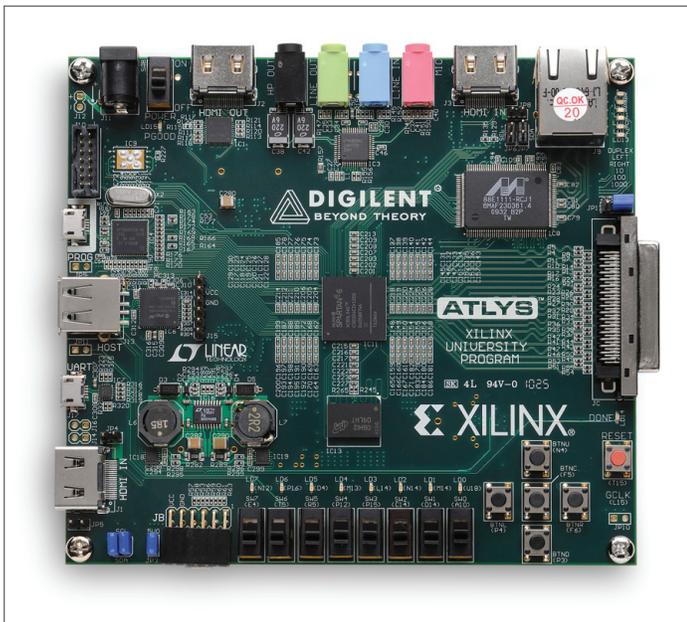
Configuration Flexibility

- On-board USB-based FPGA configuration circuitry
- Non-volatile flash

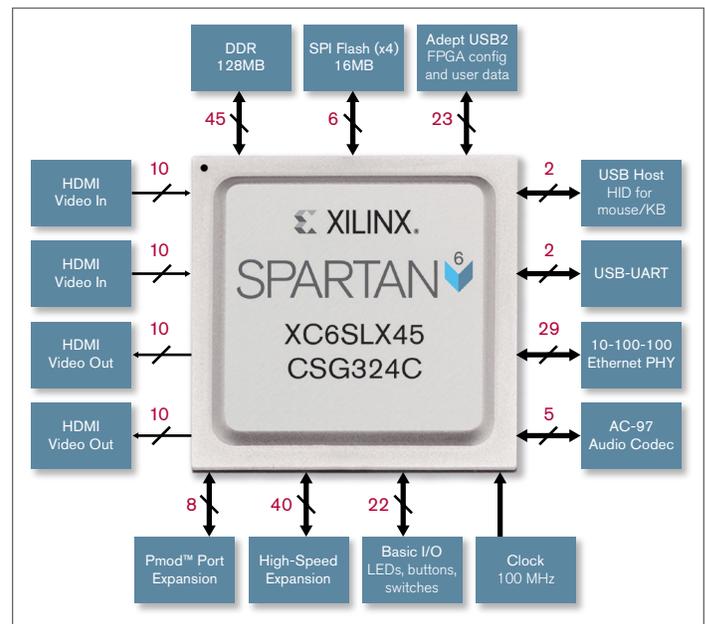
Connectivity

- 4 HDMI ports (2 input, 2 output)
- Tri-mode (10/100/1000) Ethernet interface
- Audio codec with line in, line out, microphone, and headphone ports
- USB-UART and USB-HID host ports for mice and keyboard devices
- 8 slide switches, 5 pushbuttons in "Gamepad" configuration, 8 LEDs, and 1 red reset button
- A dual Pmod connector (2x8-pin) to interface with more than 30 existing Digilent Pmod interface boards (in parallel with a single HDMI Type D connector)
- A 68-pin VHDC connector (40 pins routed)
- On-board, real-time power supply monitors

ATLYS BOARD



ATLYS BOARD FUNCTIONAL BLOCK DIAGRAM



Take the NEXT STEP

For pricing and availability, visit: www.digilentinc.com

For more information about other Xilinx University Program development kits, visit: www.xilinx.com/university

Corporate Headquarters

Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
USA
Tel: 408-559-7778
www.xilinx.com

Europe

Xilinx Europe
One Logic Drive
Citywest Business Campus
Saggart, County Dublin
Ireland
Tel: +353-1-464-0311
www.xilinx.com

Japan

Xilinx K.K.
Art Village Osaki Central Tower 4F
1-2-2 Osaki, Shinagawa-ku
Tokyo 141-0032 Japan
Tel: +81-3-6744-7777
japan.xilinx.com

Asia Pacific Pte. Ltd.

Xilinx, Asia Pacific
5 Changi Business Park
Singapore 486040
Tel: +65-6407-3000
www.xilinx.com



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