



ENTRY-LEVEL, LOW-COST
FPGA DESIGN PLATFORM

➤ Accelerated Development

- Fewer resources under tighter deadlines, new standards, and shifting requirements make for a challenging design environment.
- Market expectations for higher performance and more intelligent features require new approaches to developing electronic systems
- Today's systems call for advanced memories, connectivity, digital signal and embedded processing, all working together

➤ Simpler and Smarter Methodologies

- Xilinx Targeted Design Platforms enable software and hardware designers alike to leverage open standards, common design methodologies, development tools, and run-time platforms
- Design teams can spend less time developing the infrastructure of an application and more time building differentiating features into the end application
- Targeted Design Platforms from Xilinx and its network of third parties provide system designers with simpler and smarter methodologies for creating FPGA-based system-on-chip solutions

Accelerate your Designs – Right Out of the Box

The Spartan[®]-6 FPGA SP601 Evaluation Kit is an ideal entry-level development environment for evaluating the Spartan-6 family. This low-cost kit is the Xilinx Base Platform for developing consumer, infotainment, video, and other cost- and power-sensitive applications. As a Base Level Targeted Design Platform, the new kit provides an integration of hardware, software, IP, and preverified reference designs so development can begin right out of the box.

Value-added Productivity

Base Level Targeted Design Platforms provide value-added productivity gains that greatly exceed the sum-of-the-parts for a la carte assemblies. Functional infrastructure that already looks like your basic architecture makes you more productive as you ramp up a new design and enables quicker time-to-innovation to differentiate your products versus your competition. Multiple design examples provide insight and a kick-start on how to implement system IP to optimize your unique application.

Integrated, Easy-to-Use Solutions

The low-cost Spartan-6 FPGA SP601 Evaluation Kit includes multiple reference designs and an industry-standard FMC daughter-card connector, which allows scaling and customization to specific applications and markets. Integrated tools help streamline creation of sophisticated solutions meeting complex requirements for consumer, infotainment, display, and other applications where cost and power are paramount design considerations.

For more information, support, docs and reference designs, or to purchase, please visit www.xilinx.com/sp601.

Programmability – At the Heart of Innovation

The Spartan®-6 FPGA SP601 Evaluation Kit enables hardware and software developers to create or evaluate designs targeting the XC6SLX16-CS324 Spartan-6 FPGA. The new Spartan-6 FPGA Family offers an optimal balance of cost, power, performance, and development tool support for creating innovative products targeting consumer, automotive, surveillance, wireless, and other cost-sensitive markets.

This SP601 evaluation kit includes the industry-standard FMC (FPGA Mezzanine Card) daughter-card connector as well as many common features used in system design, including capabilities like DDR2 memory, flash, Ethernet, general-purpose I/O, and UART, to name just a few.

What's Inside the SP601 Evaluation Kit

- SP601 Base Board including the XC6SLX16-CS324 FPGA
- FPGA Design Software
 - Xilinx ISE® Design Suite: WebPACK™ Edition
- Documentation: Hardware Setup Guide, Getting Started Guide, Hardware User Guide, Reference Design User Guide, Board Schematics, and PCB Files
- Universal 5V power supply
- Cables: 2 USB, 1 Ethernet
- Reference Designs - multiple reference designs and demos enabling customers to evaluate key Spartan-6 features and capabilities



Key Features

FPGA: XC6SLX16 CS324 Spartan-6

Configuration

- Onboard configuration circuitry
- Quad SPI Flash 4Mb
- 256Mb Parallel (BPI) Flash
- JTAG

Memory

- DDR2 component memory 128Mb
- IIC 1KB IIC EEPROM

Communication

- 10/100/1000 Tri-Speed Ethernet PHY, Marvell Alaska PHY (88E1111)
- Serial (UART) to USB Bridge
- Expansion connectors
 - FMC-LPC connector (68 single-ended or 34 differential user-defined signals)
 - 8 user I/O (Digilent 2x6 Header)

Clocking

- 200MHz oscillator (differential)
- Socket (single-ended) populated with 27MHz Osc
- SMA connectors (differential)

Display

- 4X LEDs

Control

- 4X pushbuttons, 4X DIP switches

Power Management

- 5 wall
- Jumper-selectable VCCINT of 1.0V or 1.2V
- Current measurement on 3.3V, 2.5V, 1.8V, and 1.2V supplies

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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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