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Spartan-6 FPGA Connectivity Kit

Accelerate Your Designs – Right Out of the Box

Product Information   Resources

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$2,495

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Local Distributor

Part Number:
DK-S6-CONN-G
DK-S6-CONN-G-J
(Japan)

The Spartan®-6 FPGA Connectivity kit is a complete, easy-to-use Connectivity Development and Demonstration platform for designing with standards based protocols – PCIe®, Ethernet, implementing low-cost protocol bridging, providing higher efficiency alternative to LVDS communication, etc in multiple market segments.

Provided with each Spartan-6 FPGA Connectivity Kit is a FULL seat of Production Netlist of Northwest Logic Packet DMA IP Core for implementing high speed and maintaining efficient data transfer on the PCIe link. This DMA IP Core can be targeted to any Xilinx Spartan-6 FPGA.

The Spartan-6 FPGA Connectivity Kit delivers a fully tested and supported Connectivity Targeted Reference Design that integrates built-in blocks for PCI Express and Memory Controller, soft IP for Gigabit Ethernet and the DMA IP core from Northwest Logic. The Targeted Reference Design is a framework that delivers – hardware design / RTL source Files, simulation environment, implementation scripts and design flows, software device drivers, an application and a GUI.

In addition, also included with each Spartan-6 FPGA Connectivity Kit is a full-seat of Xilinx ISE® Design Suite: Embedded Edition device locked to the Spartan-6 LX45T device.

For Japan Customers Only,
please order number: EK-S6-SP605-G-J
through your local Japan distributor.

What's Included

ROHS compliant SP605 Base Board including the XC6SLX45T-FGG484 -3CES FPGA
ISE Design Suite: Embedded Edition (device-locked for the Spartan-6 LX45T FPGA) includes:
Project Navigator.
Xilinx CORE Generator® System IP available through the Embedded Development kit (EDK).
ISE Simulator – Integrated RTL simulation environment.
PlanAhead™ Design Analysis Tool.
XST Synthesis.
Timing Driven Place & Route, Smart Guide and SmartXplorer Technologies.
ChipScope™ Pro and ChipScope Pro Serial IO Toolkit

Documentation
Spartan-6 FPGA Connectivity Kit Hardware Setup Guide.
Spartan-6 FPGA Connectivity Kit Getting Started.
Spartan-6 FPGA Targeted Reference Design User Guide.
Example Designs User Guide.
Schematics and PCB files

Cables & Adapter
Universal 12V power supply
Two USB cables – enabling BIST and device configuration
One Ethernet cable – host communication to the base reference design interface
Four SMA cables
One DVI-VGA adapter – standard interface for video display

Connectivity Targeted Reference Design (TRD) and Demonstration
Design includes support for PCI Express (x1 Gen1), DMA, Virtual FIFO Memory controller supporting DDR3 interface, and Gigabit Ethernet (GMII and SFP interfaces)
TRD Design Files including top-level RTL / Source files

Product Details
Xilinx Connectivity Platforms Product Brief (PDF)

Documentation
Spartan-6 Connectivity Kit Documentation
Spartan-6 & Virtex-6 FPGA Connectivity Kit FAQ (PDF)
Targeted Reference Designs Accelerate Implementation Times for Connectivity White Paper (PDF)

Device Family Support
Spartan-6 LXT

TRD ISE Project files, Simulation and Implementation Environment
DMA Design – Northwest Logic PCIe Packet DMA (Full production version and Simulation Model)
TRD Interface Software – Linux Device Drivers, Application, Demonstration

Examples Designs and Demonstrations
Board Diagnostic Demo
ChipScope Pro Serial IO Toolkit IBERT Transceiver Test Design

USB Flash Drive
All reference designs including TRD files, demos, and documents are delivered on a USB stick.

Fedora 10 Live CD - Linux Operating System

Key Features
FPGA: XC6SLX45T FGG484-3CES Spartan-6 Configuration:
Serial Connectivity:
PCI Express x1 Edge Connector
SFP transceiver connector (SFP module not included)
SMA: 1 SMA port (Tx & Rx) for off-board GTP transceiver connectivity

Parallel Connectivity
10/100/1000 Tri-Speed Ethernet

Memory:
DDR3 Component Memory 1Gb
16MB Parallel (BPI) Flash (Also available for configuration)
IIC 8Kb IIC EEPROM

Additional Connectivity:
FMC-LPC connector (1 GTP Transceiver, 68 single-ended or 34 differential user defined signals)
User GPIO with two SMA connectors
4 User I/O (Digilent 2x6 Header)

Device Configuration
Onboard JTAG configuration circuitry
128MB Platform Flash XL
Quad SPI Flash 64MB
16MB Parallel (BPI) Flash
System ACE 2G Compact FLASH (CF) Card
JTAG

Clocking:
200 MHz Oscillator (Differential)
Oscillator socket (Single-Ended)
SMA Connectors for external clock (Differential)
Transceiver (GTP) Reference Clock port with 2 SMA connectors

Display & Control:
Video - DVI / VGA
16x2 LCD displays, LEDs
2X Push Buttons, 4X DIP Switches

Power 12V wall adapter or ATX
Voltage and current measurement capability of 2.5V, 1.5V, and 1.2V, 1.0V supplies

For further information please open a Webcase.

Xilinx offers a 90-day limited warranty on this product. See Limited Warranty for detailed information.

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