Avnet Avenue.™

Xilinx and Cypress USB 2.0 to SCSI System Solutions Kit

The Xilinx and Cypress USB 2.0 to SCSI System Solution Kit provides a complete solution for interfacing a SCSI drive to a host computer using the high-speed Universal Serial Bus Specification Revision 2.0. USB has become the dominant peripheral interface for PCs, offering a number of ease-of-use features including auto configuration, hot pluggability, low cost, and high reliability. In addition, USB is based on an industry standard that is supported by a wide range of companies, insuring its acceptance in the marketplace. With the advent of USB 2.0, this interface is capable of not only supporting full-speed (12 Mbps) transfers, it is now capable of handling high-speed data rates of 480 Mbps. This makes USB 2.0 very well suited for applications requiring the transfer of uncompressed video, very high-speed data storage and other imaging applications beyond the capabilities of other interfaces.

Avnet Design Services, Xilinx, Cypress and Mentor Graphics have created the USB 2.0 to SCSI System Solution Kit using the low-cost Xilinx Spartan™-IIE family of FPGAs. This kit is a complete applications solution and provides the designer with a Windows ready USB 2.0 to SCSI demonstration design. The design can be purchased from Avnet Design Services by qualified customers seeking to speed their time to market for USB 2.0 based designs. The kit contains complete design documentation, schematics, layout and a license to run the demonstration bit file programmed into the on-board PROM. Additionally, customers can purchase a license for the USB 2.0 IP Core, and SCSI IP Core used in the Xilinx Spartan-IIE devices for production from Mentor Graphics.
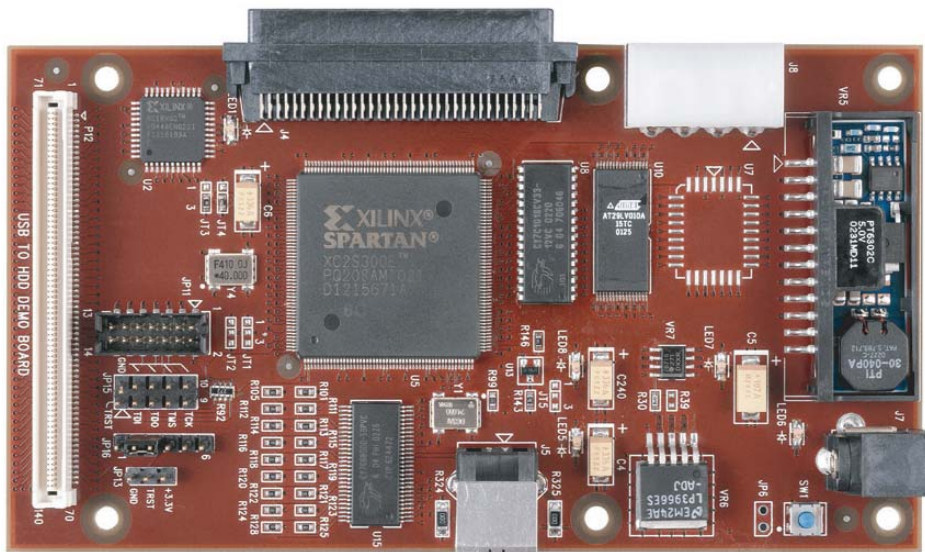
Features:

▲ FPGA/Interfaces
  • Xilinx Spartan-IIE-XC2S300E-PQ208
  • Cypress CY7C68000 USB 2.0 Phy
  • SCSI interface
  • JTAG port

▲ Memory
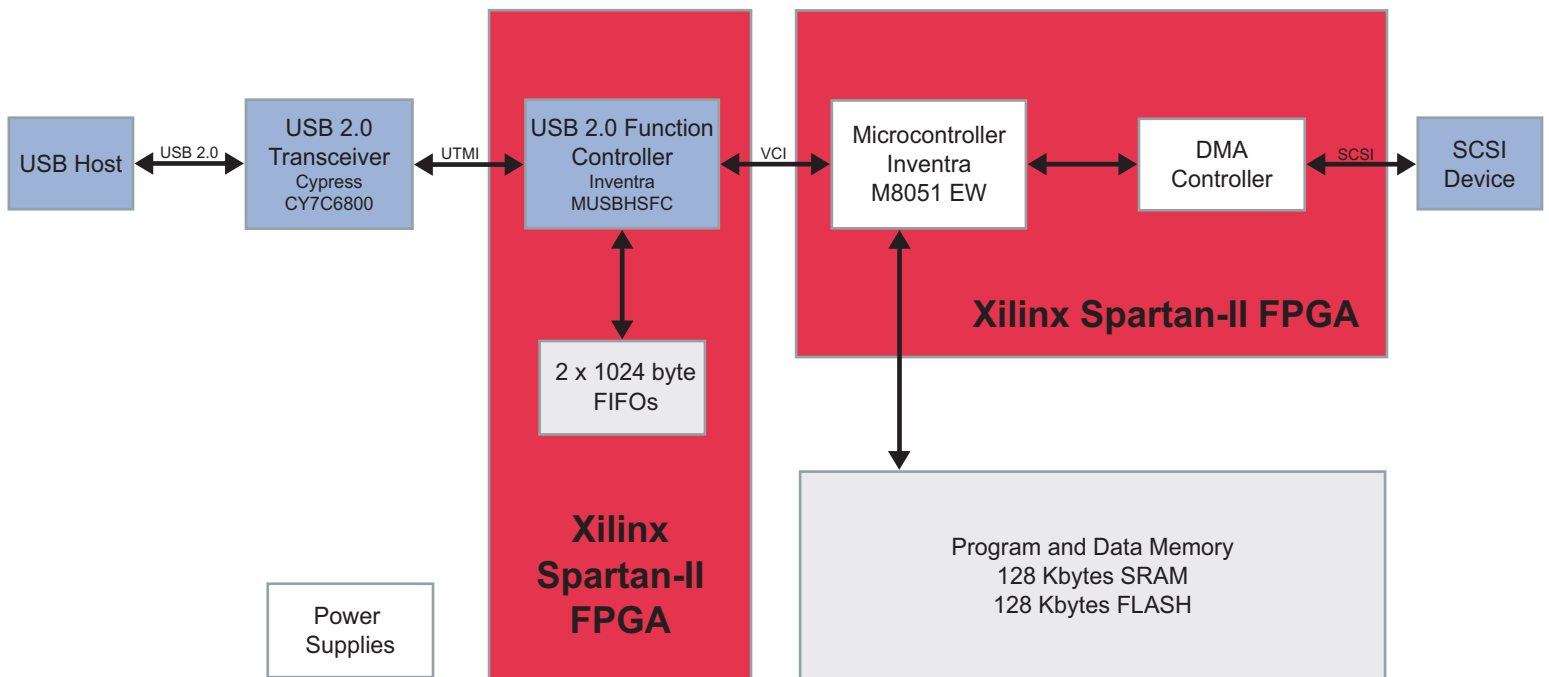 • 128 KB SRAM
  • 128 KB FLASH
  • 2-megabit configuration PROM

Target Applications:

▲ Mass storage
▲ Video display
▲ Video capture
▲ USB 2.0 peripherals

The Xilinx and Cypress USB 2.0 to SCSI System Solution Kit includes:

• USB 2.0 reference design PCB
• Power supply
• USB cable
• SCSI ribbon cable
• User's guide
• Hard drive

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electronics marketing

USB Host ← USB 2.0 → USB 2.0 Transceiver Cypress CY7C6800 ← UTMI → USB 2.0 Function Controller Inventra MUSBHSFC ← VCI → Microcontroller Inventra M8051 EW ↔ DMA Controller ← SCSI → SCSI Device

2 x 1024 byte FIFOs

Xilinx Spartan-II FPGA

Xilinx Spartan-II FPGA

Power Supplies

Program and Data Memory
128 Kbytes SRAM
128 Kbytes FLASH

Ordering Information:

Part Number	Hardware	Resale
ADS-S2E-US2-SOL	Xilinx and Cypress USB 2.0 to SCSI System Solution Kit	$499.00 USD