

FOR IMMEDIATE RELEASE

Xilinx Spartan-3 FPGA board with High Speed USB 2.0 Host Interface

Oxford, UK, 6th January 2005 – Orange Tree Technologies announces ZestSC1, a desktop FPGA development board with High Speed USB 2.0 host computer interface. It is intended for FPGA development work, training & education, and also for applications such as data acquisition, control, DSP & image processing.

The High Speed USB 2.0 interface runs at 480Mbits/sec. and can also run at the Full Speed USB 1.1 rate of 12Mbits/sec.. It achieves very high sustained bandwidths using the streaming interface of the dedicated on-board USB hardware engine. The FPGA is configured from the host computer over USB, and the USB is also used for data transfers between the board and the host computer. Configuration takes less than 20mS so the functionality of the FPGA can be changed on the fly.

High efficiency switch mode power supplies enable power to be drawn entirely from the USB cable. Combined with its small size of less than 7.5 x 12.5 cm, this means that it can be used in portable applications with a laptop. For example it can be used in the lab and can also be used out of the lab for working at home or for customer visits. Alternatively a wall adapter or hard disk drive power cable can be used to supply extra power over the 2.5W available from USB.

The FPGA is the Xilinx Spartan-3 with up to 1 million system gates, including 24 hardware multipliers and 432Kbits of RAM. This on-chip RAM is augmented on ZestSC1 by up to 8MBytes of synchronous SRAM on the board.

49 pins of user I/O are on a 0.1” pitch header. These connect directly to the FPGA providing both single-ended (LVTTTL and LVCMOS) and differential (LVDS) interfaces for data acquisition and control. The header also has 5V, 3V3 and ground pins to power a daughter card plugged into it for applications such as video in/out and ADC/DAC. ZestSC1 could for example be used as a bridge between USB and a parallel interface such as PCI or GPIB.

The board has 8 LED's for diagnostics.

Full software drivers and libraries for Windows, and logic core libraries, are supplied free with the board. These are for FPGA configuration over USB, data transfers over USB between FPGA and host, and FPGA control of the synchronous SRAM. ZestSC1 is a USB Plug-and-Play device so is very easy to set up. The free Xilinx ISE WebPACK software tools can be used to develop complete programs for the FPGA.

Prices start at 260 GBP or 495 USD for the version with the XC3S400-4 and 1MByte synchronous SRAM. Discounts are available for quantities and for students and universities.

Block diagram and photograph are attached. Click here for high resolution photograph:
http://www.orangetreotech.com/ZestSC1_highres.jpg

About Orange Tree Technologies

Led by Charles Sweeney and Matt Bowen, previously founders of the EDA company Celoxica, Orange Tree Technologies is committed to providing the highest performance and best value FPGA-based platforms. These boards can be used in a variety of systems to deliver extreme data processing performance. Target markets include military, aerospace, telecommunications, imaging and machine vision, industrial control, and education. The website is www.orangetreotech.com

All trademarks are acknowledged.

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