

FOR IMMEDIATE RELEASE

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

Oxford, UK, 28th September 2006 – Orange Tree Technologies announces ZestSC2, a high performance FPGA board that can be used stand-alone or connected by USB to a host computer. The board is aimed at data acquisition, and stand-alone embedded processing and control applications such as image processing, radar, industrial, and test.

The substantial I/O capability of 200 I/O pins is arranged on four connectors. These are 0.1 inch headers for compatibility with the widest range of external systems. The I/O voltage of each connector is independently jumper selectable between 3.3V, 2.5V, and a user-settable voltage. Each connector also has power and ground pins to power a daughter card plugged into it for applications such as video in/out and ADC/DAC. One example of the use of the board is to acquire data from a data source and process the data for display or storage on another device connected to the board.

The FPGA is the Xilinx Spartan-3 XC3S2000 (2 million gates) or XC3S4000 (4 million gates). There are two models of the board, one with the XC3S2000 and one with the XC3S4000 and 8MB SRAM. Both models have 32MB SDRAM and 200 I/O pins.

Flash EEPROM on the board is for configuring the FPGA. The Flash can be programmed from the host via the FPGA with supplied utilities, or it can be programmed from JTAG. The FPGA can be configured from Flash, host USB, or JTAG.

ZestSC2 follows on from the success of the smaller ZestSC1 and adds more resources in every area. The host software and logic interfaces are a superset of the ZestSC1 making upgrading as easy as possible. Full software drivers and libraries for Windows, and logic core libraries, are supplied free with the board. Logic interfaces are provided for the USB controller, SDRAM and SRAM, and examples show how to use the board. ZestSC2 is a USB Plug-and-Play device so is very easy to set up.

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 can be configured from the host computer over USB, and the USB is also used for data transfers between the board and the host computer, all using software and logic cores provided free with the board.

High efficiency switch mode power supplies enable power to be drawn entirely from the USB cable. This gives 2.5W but an extra USB cable can be attached just for extra power giving 5W total. Combined with its small size of less than 15 x 12 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 5W available from USB.

The board has 8 LED's for diagnostics.

Prices start at 649GBP or 1249USD for the version with the XC3S2000. 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/ZestSC2_highres.jpg

About Orange Tree Technologies

Led by Charles Sweeney and Matt Bowen, 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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