Orange Tree Technologies

PRESS RELEASE

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New ZestET2-NJ Gigabit Ethernet FPGA Module Launches

Oxford, UK company Orange Tree Technologies has just announced the launch of a compact new addition to its product family, the ZestET2-NJ, a high performance Gigabit Ethernet FPGA module. Comprising Gigabit Ethernet processing engine, Xilinx Artix-7 FPGA, DDR3 memory and general purpose I/O, it is aimed at data acquisition and control applications in markets such as industrial vision, radar, sonar and medical imaging.

The small size of the new addition makes it ideal for integration into customers' end products and as you would expect from Orange Tree boards, it concentrates on high performance without the need for any unnecessary peripherals. Delivering the maximum sustained Ethernet bandwidth of over 100MBytes/sec in both directions simultaneously, it's ideal for high bandwidth data acquisition and control applications.

The User FPGA is the Xilinx Artix-7 XC7A35T with over 33,000 logic cells, 1.8Mbits of Block RAM and 90 DSP slices. It is tightly coupled with 512MBytes of 400MHz DDR3 SDRAM, giving it an ample memory bandwidth of 1.6GBytes/sec for high speed processing and formatting of streaming data. With ease of integration in mind, there are 105 FPGA IO pins available for connection to the user's equipment.

Charles Sweeney, Hardware Director at the company, said "With the increasing use of Ethernet in many different markets such as industrial control, machine vision, defence and the medical sector, ZestET2-NJ can speed the time to market for many companies, creating a key advantage for them".

Ease of use has been a major design consideration for the product team, with Orange Tree's proprietary GigEx chip handling all the Ethernet protocols, saving application designers and

companies the headache of having to get to grips with the complexity of TCP/IP or creating their own Ethernet interface.

Now in its third generation, GigEx adds an internal user programmable SPARC-compatible CPU, which can be used for example to implement higher level Ethernet protocols such as GigE Vision. SPARC programming tools are supplied free with the module. Alternatively this CPU can be left unprogrammed and GigEx will then handle the standard Ethernet protocols.

Matt Bowen, Software Director at Orange Tree said "We based the design of GigEx on the TCP/IP engine of our highly successful previous Ethernet products. The new product design has therefore been shaped by over 5 years' practical user experience".

With the proprietary protocol chip GigEx handling the whole TCP/IP stack at over 100MBytes/sec in each direction simultaneously, it allows the User FPGA to be dedicated entirely to the application for maximum efficiency. The module measures just 40 x 50mm, making it ideal for integration into customers' products.

The TCP/IP engine in GigEx runs at 10/100/1000 Mbits/sec and implements the following protocols: TCP/IP, UDP, ARP, IPv4, ICMP, IGMP, PTP and HTTP. For real-time applications, Precision Time Protocol (PTP) and SyncE offer time of day and a 125MHz clock synchronised across the network to other network devices.

----------ENDS----------

Editor's Notes

Contact: Charles Sweeney Tel: +44 1235 838646 E-mail info@orangetreetech.com

Please click here for further information http://www.orangetreetech.com/zestet2-nj.php

Purchasers of the new board will have the added bonus of full software libraries for Windows and Linux bundled free with the product. There is a Breakout board for evaluation of the board.

The module is available immediately and there are discounts for quantities and for students and universities.

Orange Tree Technologies is a board level embedded hardware and software company specializing in high-speed embedded device interconnect and FPGA technologies. Used by some of the world's leading technology companies our products and services help address the challenges of convergence in the defence, industrial, scientific and consumer electronics markets.

Orange Tree Technologies has been providing high-speed embedded device interconnect solutions since 2001. OEM engagements are supported through customization via Orange Tree's dedicated design services function. Headquartered in Oxford, UK, Orange Tree Technologies is a privately held company and operates internationally.