

**For Immediate Release**

## **Orange Tree announces Gigabit Ethernet FPGA module with TCP/IP Offload Engine**

***ZestET2-J provides simple access to very fast data rates***

Oxford, UK – 19th October 2016

[Orange Tree Technologies](#) today announced the [ZestET2-J](#), an FPGA module with a very high performance TCP/IP Offload Engine (TOE) chip for Gigabit Ethernet interfacing.

The easy to use module provides simple access to very fast data rates over Gigabit Ethernet, without having to integrate complex networking hardware and software. It can be used as a programmable interface to external devices, for high speed processing of streaming data, and for data acquisition and control, in markets including industrial vision, radar, sonar and medical imaging.

Orange Tree's proprietary GigExpedite chip "GigEx" is a TOE that handles all the Ethernet communications protocols. This leaves the Artix-7 FPGA completely free for the user's application, and means the user does not require any knowledge of Ethernet protocols. With the main processing engine implemented in TOE hardware, sustained data rates over 100MBytes/sec are achieved.

While keeping its size small at only 40 x 67 mm, the new board builds on Orange Tree's existing ZestET2-NJ module, and adds an RJ45 Ethernet jack and a power jack. This means that it can be used on a bench top or desk top for development work, and the target carrier board doesn't need an Ethernet jack – therefore removing any design work involving high speed signal integrity of Gigabit Ethernet tracks. The ZestET2-J can also be used stand alone without a carrier board.



The third generation of Orange Tree's custom GigEx chip provides a user-programmable CPU. This is completely free for the user to program, for example with higher level Ethernet protocols such as GigE Vision and Industrial Ethernet, or it can be left unprogrammed.

105 user I/O pins provide maximum flexibility for end applications. Orange Tree also offers a pair of breakout boards, which connect the module's high density Hirose I/O connectors to 0.1" pitch headers and an FMC (FPGA Mezzanine Card) connector.

Charles Sweeney, Hardware Director at Orange Tree Technologies, said, "Our existing ZestET2-NJ has proved its value, delivering a simple yet fast Gigabit Ethernet interface – with the Ethernet protocols offloaded to our efficient GigEx chip. Now, the ZestET2-J provides extra connectivity and convenience, helping OEM customers to develop applications quickly, and cut time to market."

The user-programmable Xilinx Artix-7 FPGA is coupled with 512MBytes of high speed 1.6GBytes/sec DDR3 memory. The FPGA can be programmed from on-board Flash, Ethernet or JTAG.

Software available from Orange Tree includes free Windows and Linux tools based on GCC and Eclipse for the GigEx User CPU, and Windows and Linux software support for configuring and communicating with the User FPGA. Free tools are available from Xilinx for creating FPGA designs.

The ZestET2-J is available now. For pricing, please contact Orange Tree Technologies – discounts are available for quantities, and for students and universities.

### **About Orange Tree Technologies**

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 rapidly changing industrial, medical, defence, scientific and consumer electronics markets.



Orange Tree's core focus is on connecting real-time devices to computers with high-speed Gigabit Ethernet and USB. We exploit the latest FPGA technologies in our off-the-shelf products to give reduced time to market and upgradeability for our customers. Since we were founded in 2001, we have gained world-class expertise in the fields of data acquisition, data processing and device-host interconnect.

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.

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