IOxOS Technologies releases its first VME64x Single Board Computer based on COM Express™ and Xilinx Virtex-5T FPGA for Mil/Aero test equipment, industrial regulation and high-performance control systems

Geneva (Switzerland), December 2011 - IOxOS Technologies introduces the VCC_110x series, its first family of 6U VME64x Single Board Computers leveraging the latest generation of Intel® Core™ i5 and i7 processors. This new Intel® based platform allows the implementation of Mil/Aero test equipment, industrial regulation and high-performance control systems in standard VME64x environments requiring high computing performance.

The wide availability of COM Express™ modules from several suppliers allows the upgrade of VME64x based applications to the latest computing technology. In addition, long term obsolescence can be easily managed with de facto standard COM Express™ modules.

The use of custom designed heat sinks allow to support different configurations depending on power consumption requirements. These configurations range from VME single width for COM Express™ modules up to 17[W] (dual core i7 @ 1.5 GHz), to VME double width for COM Express™ modules up to 35[W] (dual core i5 @ 2.5 GHz).

The VCC_110x series are powered by the industry's highest performance PCI Express to VME64x transparent bridge, which is fully embedded within the Virtex-5T FPGA and based on a proprietary Network on Chip (NoC) architecture. This bridge provides a non-blocking, controlled low latency and high-throughput bandwidth interface between the data producer and the data consumer.

The PCI Express GEN2 infrastructure is enhanced with a latest generation PCI Express switch enabling advanced features such as multiple PCI Express time domains, multicast, DMA and several non-transparent bridging (NTB) ports. The VCC_110x series also feature the new 3M Ultra Hard Metric (UHM) connector technology which enhances the legacy VME64x P0 connector with high-speed serial protocols supporting data rates up to 7 Gbps (such as PCI Express and proprietary CDL links).

In terms of expansion capabilities, the VCC_110x feature one PMC IEEE 1386.1 slot with support of legacy 32-bit PCI (33/66 MHz) and two XMC VITA 42.3 slots supporting PCI Express x4 GEN2. The expansion capabilities are enhanced with two FMC VITA 57 High Pin Count (HPC) slots directly routed to the Virtex-6T FPGA to be managed by the end user custom application.

TOSCA II, a comprehensive FPGA Design Kit developed by IOxOS Technologies, is available for the implementation and integration of custom applications within the IFC_1210 on-board Virtex-6T FPGA, which supports the following FF1156 devices: LX130T, LX195T, LX240T, LX365T, SX315T and SX475T.

The VCC_1105 is available in air-cooled format (conduction-cooled version upon request) with OS support for Windows, VxWorks and Open Source Linux.