IOxOS Technologies releases the next generation of its Obsolescence-proof VME64x product line of Single Board Computers and Carriers featuring NXP QorIQ T Series and Xilinx Artix-7 and Kintex UltraScale devices

Geneva, 4th of August 2016 - IOxOS Technologies is releasing the next generation of its VME64x product line of Single Board Computers and Carriers, combining latest T Series processors from NXP and high-end Kintex UltraScale FPGAs from Xilinx with a comprehensive FPGA Design Kit and a set of high-performance FMC and XMC modules. The high computing performance per watt of the QorIQ platform series and the powerful versatility and capacity of these high-end FPGAs make possible the implementation of very sophisticated FPGA-driven applications in standard VME64x environments fulfilling the most demanding requirements of Mil/Aero, High Energy Physics and Transport industries.

Obsolescence Proof

All COTS of this new family feature the ALTHEA 7910 VME64x interface, an FPGA based solution developed by IOxOS Technologies that overcomes the obsolescence threaten posed by the EOL announcement of the Tsi148 back in 2014.

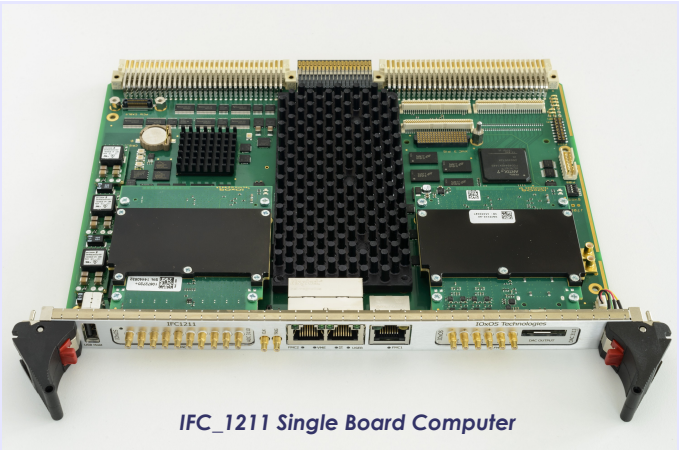
In 2015, IOxOS Technologies decided to market this solution, opening the technology to other VME manufacturers. The specialized media promptly echoed this initiative, and its remarkable market uptake, where the ALTHEA 7910 solution has been adopted by key VME suppliers worldwide to retrofit their existing legacy systems and to develop new programs, shows the good health of a form factor that is now celebrating its 35th anniversary.

A true *VME Renaissance*.

IFC_1211 - VME64x Single Board Computer

The IFC_1211 is the cornerstone of IOxOS Technologies new VME64x product line. This 6U Single Board Computer leverages the NXP QorIQ T2081 processor and Xilinx Kintex UltraScale FPGA win-win combination.

The NXP T2081 processor running at 1.8 GHz delivers high-performance quad-core computing with energy efficiency, brings back the AltiVec floating point unit and it is supported with up to 4 GBytes of soldered DDR3L SDRAM with ECC, non volatile memory (NOR, NAND and MicroSD media) and full I/O capability including in its front panel two Gigabit Ethernet connections, USB 2.0 and RS232.



IFC_1211 Single Board Computer

This SBC is powered by the ALTHEA 7910 VME64x interface. This field proven solution natively supports all Master/Slave VME64x modes of operation with Slot_1 System Controller function, including VME64x data transport 2eVME and 2eSST modes with maximal burst length capability, while guaranteeing very long term availability of the board as a result of not depending on already obsolete third party VME interfaces.

The IFC_1211 is equipped with an Ultra Hard Metric (UHM) connector from 3M which enhances the legacy VME64x P0 connector with high-speed serial protocols supporting data rates up to 7 Gbps (such as PCI Express GEN2 and proprietary CDL links).

In terms of expansion capabilities, the IFC_1211 features one PMC IEEE 1386.1 slot with support of legacy 32-bit PCI (33/66 MHz), one XMC VITA 42.3 slot supporting PCI Express x4 GEN2, and two FMC VITA 57 High Pin Count (HPC) slots directly routed to the Kintex UltraScale FPGA to be managed by the end user custom application and make the most of IOxOS Technologies line of FMC modules for high-performance data acquisition.

The expansion capabilities are enhanced by attaching the new XPM 1262 expansion module that provides two additional PMC/XMC slots directly connected to the IFC_1211 PCI Express infrastructure by means of a high-speed coax flat cable.

TOSCA III, a comprehensive FPGA Design Kit developed by IOxOS Technologies, is available for the implementation and integration of custom applications within the IFC_1211 on-board Kintex UltraScale XCKU40 FPGA. This design solution is endorsed by the many applications successfully developed and deployed with the previous version based on Xilinx Virtex-6T devices.

The IFC_1211 is available in air-cooled format (conduction-cooled version upon request) with OS support for VxWorks and Open Source Linux.

PEV_7912 - PCI Express to VME64x Bridge

PEV_7912 PCIe to VME64x Bridge

The PEV_7912 is a 6U VME64x PCI Express to VME bridge board with enhanced expansion capabilities and fully compliant with the latest PCI-SIG's "PCI Express External Cabling Specification", allowing to extend its onboard PCI Express bus infrastructure and to break trough the VME crate boundaries with both copper and optical fiber standard cables.

The VME64x interface is implemented using IOxOS Technologies proprietary ALTHEA 7910 solution, a Xilinx Artix-7 based PCI Express to VME64x Bridge. Since 2015, this interface is marketed and it has been adapted by relevant VME manufacturers worldwide to replace the obsolete Tsi148 VME interface.

The PEV_7912 features two PMC IEEE 1386.1 slots 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 by attaching the new XPM_1262 expansion module that provides two additional PMC/XMC slots directly connected to the PEV_7912 PCI Express infrastructure by means of a high-speed coax flat cable.

The board features a built-in health monitor to check temperature and power supply parameters, and is compliant with VITA 35 supporting P4V2-64ac and P4V0-64 configurations.

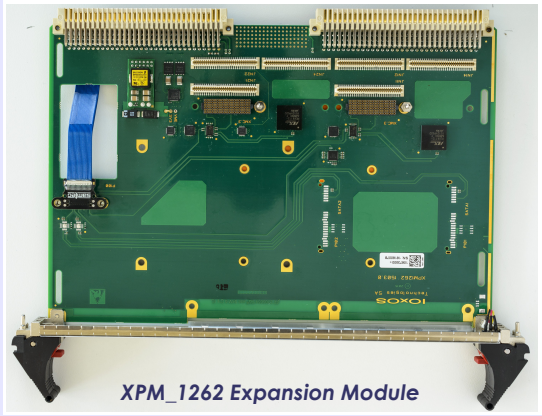
VDC_7920 - VME64x Dual PMC/XMC Carrier

The VDC_7920 completes this new product line by adding a 6U VME64x dual PMC/XMC carrier board with enhanced expansion capabilities featuring true PCI Express x4 Root Complex capability to configure the plugged XMC/PMC modules directly from VME.

The VME64x interface is implemented using IOxOS Technologies proprietary ALTHEA 7910 solution operating in Root Complex mode.

The VDC_7920 features two PMC IEEE 1386.1 slots 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 by attaching the new XPM_1262 expansion module that provides two additional PMC/XMC slots directly connected to the VDC_7920 PCI Express infrastructure by means of a high-speed coax flat cable.

The board features a built-in health monitor to check temperature and power supply parameters, and is compliant with VITA 35 supporting P4V2-64ac and P4V0-64 configurations.



XPM_1262 Expansion Module

For further information, please contact info@ioxos.ch

IOxOS Technologies SA, based in the Geneva area (Switzerland), is an electronic design company offering innovative solutions to system integrators in the Mil/Aero, Transport and High Energy Physics industries. It combines a comprehensive product line with engineering, consulting and training services covering both hardware and software

IOxOS TECHNOLOGIES
RELIABILITY BY DESIGN