

720MB/sec VXS Data Recorder

VMETRO expands its Vortex range of high-speed data recording solutions with the introduction of the Vortex M6000 VME/VXS recorder.

Inside this issue:

• • • • •
μTCA 6U Portable 2
Tower

μTCA Carrier Hub 2
(MCH)

Raytheon Selects 3
RTI Real-Time
Middleware

VMDRIVE Solid 3
State Drive—VME
or CPCI

Dual Channel 4
105MHz ADC
based on Virtex-5
FPGA

VxWorks the First 4
OS to Achieve
Certified Confor-
mance to POSIX
PSE52

Supporting dual 4 Gb/s or quad 2Gb/s Fibre Channel ports, this high speed recorder is able to achieve 720MB/s recording performance in a single 6U VXS (VITA-41) slot. The Vortex M6000 recording engine provides an effective platform for a number of applications in industrial inspection systems, medical scanners and Intelligence, Surveillance and Reconnaissance (ISR) applications such as Signal Intelligence as well as Software Defined Radio, Synthetic Aperture Radar, Moving Target Indicators and many other high-speed data recording needs.

The Vortex recording engines are the common foundation of all of VMETRO's Vortex data recording and playback solutions. The Vortex M6000 VXS/VME data recording and playback systems include fourth generation hardware platforms designed to provide the highest possible streaming data throughput from the I/O interface to the storage system. An extensive open recorder software library complements this very capable hardware engine utilizing a common code base across all hardware platforms and operating systems. This provides a fully maintained and consistent API and compatibility across all Vortex recorder, SAN and workstation connectivity products. These high-speed recorders achieve high performance ratings in both commercial and ruggedized environments utilizing Fibre Channel storage area network media in JBOD or RAID configurations from cost effective commercial to rugged and solid-state storage.



Vortex M6000 features:

- VME/VXS (VITA-41) Recording, Playback and Analysis Solutions
- Dual 4 Gb/s or Quad 2 Gb/s Fibre Channel interfaces
- Customizable I/O through XMC/PMC sites utilizing PCI Express or PCI-X/PCI
- Available as open (customer programmable) or turn-key versions
- Pre-programmed web-browser GUI for all recorder functions
- VxWorks and Linux support



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ATCA and μTCA products and support

- **ATCA Products:** Chassis, Backplanes, Boards, Hubs, Storage, AMC Carriers, Shelf Managers, Panel Kits
- **μTCA Products:** Chassis, Backplanes, MCH, Panel Kits, Air Baffles, Power Supplies
- **AMC Products:** Boards (Processors, Ethernet, SATA, E1/T1), Panel Kits and Air Baffles
- **Useful Links:** Standards, Specifications, Publications, Tutorials, Shelf Management Manuals

μTCA 6U PORTABLE TOWER

Elma Electronic Inc., a global manufacturer of electronic packaging products, has announced a new μTCA Portable Tower. The first of its kind in the industry, the Tower features a carrying handle for easy portability.

The Type 32M μTCA Portable Tower is ideal as a development chassis. Utilizing Elma's modular extrusion-based design, the chassis facilitates a wide range of configurations. It allows up to 6 AdvancedMC's in the full size format. The modules could be either single or double width format in the same backplane. With two μTCA Carrier Hubs (MCH), the backplane has a Dual Star architecture. There are also redundant power modules, connections for two cooling units and M4 power bolts. The MCH slots come in 1-4 tongue styles.

The Type 32M features advanced EMC shielding, scratch-resistant vinyl clad aluminum covers, and power components. Cooling is achieved with 2 x 90 CFM fans. Elma has performed thermal simulations to ensure the optimal performance.

- 6U H x 63HP W x 299mm D
- Holds 10 modules in single module, full-size
- 10 slot Dual Star backplane; 6 AMC, 2 x MCH, 2 x PSU
- Pluggable fan tray with removable air filter in push cooling configuration
- Convenient tower handle makes it ideal for portability
- 2 48VDC input single/full-size power modules (included)
- Accepts 2 x single/full-size MCH's (not included)



μTCA Carrier Hub (MCH)

Powerful management and data switching device for all μTCA systems.

N.A.T. has announced the NAT-MCH, a μTCA Carrier Hub in the form factor of a single width double height Advanced Mezzanine Card (AMC). It provides central management and data switching for all μTCA systems. The NAT-MCH comprises of a base module and numerous optional daughter cards which can be mounted on the base module. The NAT-MCH is μTCA .0 R1.0 compliant and delivers switching and hub functionality for the various system fabrics as defined in the AMC.x standard series, i.e. Gigabit Ethernet, PCI-Express (PCIe), Serial Rapid I/O (SRIO) or Serial Attached SCSI (SAS). The NAT-MCH can also provide a centralized clock distribution to all AMCs in the system.

The NAT-MCH base board is equipped with a CPU of the Freescale ColdFire family of processors. The CPU operates at core frequency of 200 MHz. The NAT-MCH provides 32MB SDRAM and 16MB FLASH memory. The operating system used with the NAT-MCH is Linux.

- Support for 12 AMCs, 2 Cooling Units, multiple Power Units
- GigaBit Ethernet switching
- PCI Express switching
- Telecom and non-Telecom clocks
- Management Controller (MCMC)
- HPI based API
- Java based GUI for Linux and Windows Hosts



Raytheon Selects RTI Real-Time Middleware for U.S. Navy Destroyer Program

RTI Data Distribution Service Powers the Total Shipboard Computing Environment Infrastructure for the DDG 1000 Zumwalt Class Destroyer

Real-Time Innovations (RTI), The Real-Time Middleware Company, has announced that Raytheon Integrated Defense Systems has incorporated RTI Data Distribution Service into the implementation of the Raytheon Total Ship Computing Environment Infrastructure (TSCEI) Release 4.0. RTI Data Distribution Service enhances TSCEI to deliver robust and reliable real-time data distribution over a comprehensive shipboard network.

RTI Data Distribution Service provides the real-time data distribution layer for TSCEI, enabling high throughput and low latency messaging between shipboard applications.

TSCEI is an open architecture platform for software application development for the U.S. Navy DDG 1000 Zumwalt Class Destroyer Program. TSCEI is composed of an integrated suite of standardized hardware, operating system, middleware and infrastructure services. It forms the backbone of the robust, enterprise-network computing system on which all DDG 1000 application software programs run. Among TSCEI 4.0's new enhancements is support for IBM blade server processors running the Red Hat Linux operating system.

" The selection of RTI came through a process which uses formal evaluation criteria and a source selection board to ensure that the Navy gets the best value. This is an emerging product market and it was determined that the offering from RTI , a privately held company, provides the best value to the Navy." Raytheon DDG 1000 System Software Development director Bob Martin said.

SCEI provides the backbone behind all mission-critical applications, including command-and-control, navigation, targeting, weapons control, and radar systems. RTI Data Distribution Service enables these applications to reliably share data and coordinate defenses. Further, the publish-subscribe mechanism used by RTI ensures that new applications can be seamlessly integrated into the environment with the ability to subscribe to existing data and publish new data.

About RTI Data Distribution Service

RTI Data Distribution Service (formerly NDDS) is networking middleware that implements a real-time publish-subscribe communications model and allows distributed applications to share data without concern for physical location or network architecture. RTI Data Distribution Service is an open-architecture platform that complies with the Object Management Group (OMG) Data Distribution Service for Real-Time Systems (DDS) standard. Available with C, C++ and Java programming interfaces, RTI Data Distribution Service is field-proven in a wide variety of time-critical applications.

VMDRIVE Solid State Drive—Single board VME or CPCI

40 or 80 GB Rugged Storage for Rugged environments

Designed to meet demanding military and aerospace applications, the VMDRIVE deploys 40 or 80GB solid state storage in rugged conduction-cooled or commercial air-cooled environments. The single slot 6U VME or Compact-PCI VMDRIVE incorporates dual channel 2Gbps fibre channel interfaces to store data up to 70 MegaBytes per second. The dual fibre channel ports allow the VMDRIVE to connect to Fibre Channel Storage Area Networks (FC SAN) for use in data recording applications.

The conduction-cooled version has been tested for Shock and Vibration relative to Military Spec 810F for use in helicopters.

- 40 or 80 GB Storage for 6U VME or CompactPCI form factors
- Dual 2Gbps fibre channel interfaces
- 70 MBytes/s bandwidth
- Commercial air-cooled or rugged conduction-cooled build options



Dual Channel 105MHz ADC based on Xilinx Virtex-5 FPGA

VMETRO announced the PMC-FPGA05-ADC1, a Xilinx, Inc. (NASDAQ: XLNX) Virtex™-5 LX110 FPGA based PMC module with integrated dual analog input channels. By closely coupling the high-performance FPGA processing and the analog I/O, the PMC-FPGA05-ADC1 is ideal for applications requiring maximum performance with minimal latencies such as Software Defined Radio, Signal Intelligence and data recording. The analog input front end incorporates dual channel analog input (at 14 bit each) with a full power input bandwidth of between 100 kHz and 110 MHz with a Signal to Noise Ratio of 68dB and a Spurious Free Dynamic Range of 82dB. The full scale analog input is +10dBm (2V pk-pk). Front panel clock and trigger inputs are also available.

The PMC-FPGA05-ADC1's high performance dual analog interfaces combined with the processing power and PCI-X bus interface enable this PMC module to provide front-end processing. Processing on the PMC-FPGA05-ADC1 is provided by a Xilinx XC5VLX110 Virtex-5 FPGA. Supported by three banks of QDRII SRAM (8Mbytes per bank) and two banks of DDR2 SDRAM (128Mbytes per banks), the Virtex-5 FPGA is capable of performing sophisticated, high-speed DSP tasks in a small footprint. The PMC module supports a 133MHz PCI-X interface as well as PMC digital user I/O via the Pn4 connector. Both of these interfaces are provided by the FPGA.



The PMC-FPGA05-ADC1 is just one member of VMETRO's Virtex-5 based FPGA family of products which include variants for Camera Link, analog output, LVDS, L-band receivers, FPDP/FPDP-II, and RS422/485 to address applications such as imaging and telecommunications.

Software support for the PMC-FPGA05-ADC1 includes host drivers for Windows and VxWorks. Linux support is scheduled for the second half of 2007. The drivers support high-speed DMA to minimize potential bottlenecks between the analog input, the FPGA and the host processor. Utilities and example VHDL are provided to support customers' development of FPGA firmware as well as providing diagnostic support.

Wind River's VxWorks Becomes the First Operating System to Achieve Certified Conformance to POSIX PSE52 Real-Time Controller Profile Standard

Wind River Systems, Inc. the global leader in Device Software Optimization (DSO), recently announced that Wind River's VxWorks 6.4 real-time operating system (RTOS) is the first operating system to achieve certification for conformance to the PSE52 Real-Time Controller 1003.13™-2003 Product Standard within the *POSIX®: Certified by IEEE and The Open Group* certification program. Wind River is the first device software company to achieve this certification.

"We congratulate Wind River on being the first to achieve the PSE52 1003.13 Real-Time Controller certification for VxWorks 6.4," said Andrew Josey, director of certification for The Open Group. "Achieving this certification is a significant achievement and clearly demonstrates Wind River's commitment to open standards in its Device Software Optimization platform solutions."

Availability

VxWorks 6.4 with certification for conformance to the PSE52 1003.13-2003 Product Standard will be available December 2006 in the following products:

- Wind River® General Purpose Platform, VxWorks Edition 3.4
- Wind River® Platform for Automotive Devices, VxWorks Edition 3.4
- Wind River® Platform for Consumer Devices, VxWorks Edition 3.4
- Wind River® Platform for Industrial Devices, VxWorks Edition 3.4
- Wind River® Platform for Network Equipment, VxWorks Edition 3.4
- Wind River's VxWorks 6.4, Perpetual