Dedicated Systems' News

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WIND RIVER WORKBENCH for Linux and VxWorks

Inside this issue:

Wind River Workbench is the first and only development environment that enables companies to work with both VxWorks and Linux, the standards in device software development.

Wind River Workbench 2.0:

- **Now cross-project, cross-platform development can be done efficiently**
- **Reduces training costs with one environment, one set of tools**
- **Increases developer proficiency - no retraining required**
- **Improves collaboration and productivity across the real-time enterprise**

Wind River Workbench 2.0 (formerly known as Wind Power IDE 2) fully integrates and optimizes the development environment. Developers can now create and deploy application software with a higher degree of flexibility and openness.

Flexibility Companies now have the freedom to deploy the right technology where they need it, when they need it. Now or in the future. By supporting a wide range of processors, architectures and operating systems, **Wind River Workbench 2.0** is the ideal standard environment for the enterprise.

Openness **Wind River Workbench 2.0** is based on the Eclipse framework. By combining a common look and feel with best-in-class development tools across environments and on all hosts, it enables seamless integration with in-house and third-party tools.

Wind River Workbench 2.0 will support development on the Linux kernel and will be integrated with the next generation of Wind River Platforms.

Included are:

- ⇒ **Editor**
- ⇒ **Code Browser**
- ⇒ **Project Management and Build Tools**
- ⇒ **CM Integration**
- ⇒ **Wind River Debugger**
- ⇒ **Wind River and GCC Compiler support**
- ⇒ **Wind River System Viewer for system level runtime analysis**
- ⇒ **Memory use, Profiling, Code Coverage, Execution Trace, Value Tracking via RTI Scope Tools**
- ⇒ **Simulation Capability**

Story ID 1

Mezzanine card PMC bezels added to front panel range

ELMA has expanded its CompactPCI packaging support with a new range of PMC bezels, gaskets and fillers in a range of standard finishes, backed by a full customisation service. The new bezels are available in aluminum or zinc, while the snap-in shielded filler panels are stainless steel. Standard parts are available ex-stock, while custom machining or silk-screening are typically available in 3 weeks, offering a fast and easy route to mezzanine card hardware development. These PMC bezels comply with the latest IEEE P1386 standards, and are stocked in industry-standard 10 mm mounting tab height.

The bezels are available either in extruded aluminum with 240 grit graining and a clear alodine finish, or in die-cast zinc with a zinc finish. Both types are supported by flexible silkscreen and CNC machining to produce custom markings and cutouts even in prototype quantities.

In addition to the shielded stainless steel filler panels, Elma also offers gaskets in both wire-spring stainless steel and elastomer form to suit either the extruded aluminum and cast zinc bezels. These new bezels complement the recently launched "**Front panel express**" service for customised front panels for CPCI and other formats.

Elma had just recently introduced its **Front Panel Express Service**.

With this service Elma offers the production of machined and silk screened front panels in 10– 15 working days.

Story ID 2

Tel. 08 8339 1964 **Fax. 08 8370 1466** **Sales@dedicatedsystems.com.au** **www.dedicatedsystems.com.au**

200W / 400W CPCI Power Supplies

Elma has extended its support for complete cPCI enclosures and sub-racks, by launching the first of a range of low cost, high reliability AC/DC and DC/DC power supplies.

- Wide AC Input
- 24VDC and 48VDC Inputs
- 200 Watt ; 3U / 8HP - 400 Watt 6U / 8HP
- Active power factor correction
- Operation temperature range -10°C - +55°C without derating
- "Hot-swap" and current sharing features for N+1 Redundant connection
- No minimum load requirement
- Standard 47 Pin per PICMG 2.11
- Worldwide safety approvalS including UL, CSA, TÜV and CE marking
- Inhibit & Power OK per PICMG 2.11
- DEG# signal: TTL compatible signal
- I²C Data Bus
- MTBF: > 400.000 hours per Bellcore
- 3U from AUD770.00 6U from AUD1,070.00 (plus GST)

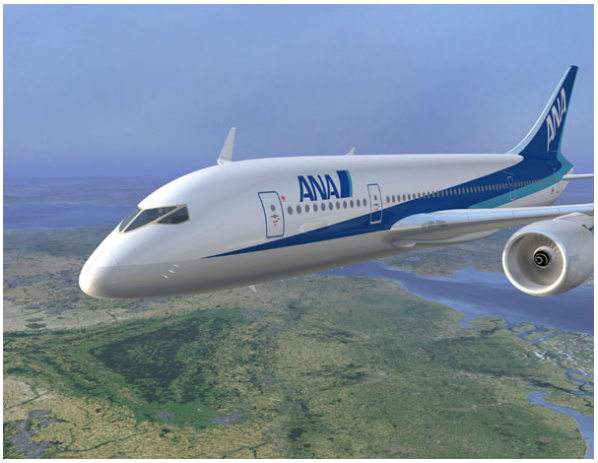
Story ID 3

Wind River teams with AdaCore on Platform Safety Critical ARINC 653 for Use in Boeing 7E7 Common Core System

The Wind River Platform with AdaCore's technology will be used on the 7E7's Common Core System, provided by Smiths Aerospace, which is the backbone of the airplane's computers, networks and interfacing electronics. The 7E7 Common Core System comprises approximately 80 to 100 applications running simultaneously which will control many of the airplane's avionics and utilities functions.

⇒ **Wind River and AdaCore software will be used in Boeing's new 7E7 Dreamliner, powering the Common Core System, which is the electronics and software backbone of the airplane**

⇒ **AdaCore's development tool, GNAT Pro High Integrity Edition for AE653, will be integrated into Wind River Platform for Safety Critical ARINC 653.**



Wind River Platform for Safety Critical ARINC 653 is part of Wind River's Safe and Secure Program, which provides fully integrated device software platforms to meet the FAA's stringent safety certifications. **AdaCore's** GNAT Pro High Integrity for AE653 was developed specifically for Wind River Platform for Safety Critical ARINC 653. Based on the Ada programming language, Ada Core's development tools have been used extensively in recent years for safety-critical avionics applications because of its high levels of portability. With AdaCore's GNAT Pro High Integrity now built into Wind River's Platform for Safety Critical ARINC 653, Boeing and its other 7E7 suppliers will be able to leverage their existing software investments and easily adapt them to be used in the new Common Core System architecture.

Story ID 4

AdvancedTCA Packaging Solutions

The **A**dvanced **T**elecom **C**omputing **A**rchitecture specification (PICMG 3.0) was originally tailored specifically to the telecom market, but high performance networking products can also be built with this platform.

A new form factor has been defined with a board height of 8 U, a front board depth of 280 mm and a rear I/O board (RTM) depth of 70 mm. The front panel width is 6 HP with the board offset by 0.1". The offset provides more room for SMT components on the rear of the board. Repositioning the EMC gasket to the left side of the front panel lowers the risk of component damage during extraction of the boards. The new handle has been optimized for high insertion and extraction forces.

Our range of ATCA products comprises these features:

- They support a full array of B**ackplane Topologies**: Dual Star, Dual Dual Star or Full Mesh interconnect.
- Backplanes are configurable to support both, **Radial and Bussed IPMI Topology**
- They offer state-of-the-art **shelf and thermal management**
- **14 Slot /12U and 14U Chassis (16 Slot / 13U coming soon)**
- **5 Slot / 5U chassis**
- **2 Slot / 3U Development Chassis with Power Supply**
- **Fan Controller & Shelf Manager Boards**
- **Backplanes 2, 5, 14 Slots**
- **CPCI to ATCA Adapter Board**

The traditional parallel bus is substituted by fast serial connections. When a Dual Star backplane is used, two Fabric and twelve Node Boards can be used in a chassis designed to fit into a 19" cabinet. With a Full Mesh backplane 14 Node Boards can be used. Other backplane architectures may be built such as Dual Dual Star and Replicated Mesh. The specification also allows 16 slot systems to be built that fit into 23" telecom or 600 mm ETSI cabinets.

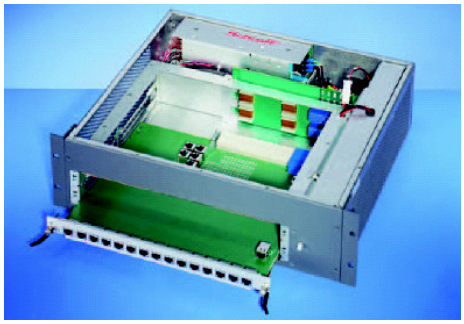
AdvancedTCA systems are designed for a maximum power dissipation of 200 W per board. A 14 slot chassis can dissipate up to 2.8 kW.

The connectors in an AdvancedTCA system are categorized into three different groups, Zones 1 through 3.

The Zone 1 connector provides power, primary (IPMI) system management, and the board's geographic address.

The Zone 2 connectors have both a 10/100/1000BASE-T Base Interface and a Fabric Interface defined. The Base Interface is used for transferring FLASH memory images, loading firmware, and high level management functions. The Fabric Interface is used to transfer large amounts of data at high speeds.

The Zone 3 connectors are determined by the individual application. The 70 mm deep RTM (Rear Transition Module) connects directly to the front board. This allows either metallic or fiber connectors to be used between the front board and the RTM.



An efficient management system with electronic keying is responsible for monitoring and powering up the boards, enabling the fabric ports, thermal management, remote maintenance and software updates.

Story ID 5

HIGH INTEGRITY CODING PRACTICES C, C++, JAVA

Programming Research Ltd. ("PRL") develops, markets and delivers software tools to address the specific needs of those aiming to achieve stated levels of software quality for applications written in C, C++, Java and Fortran. PRL is an active contributor to organizations who specify industry-wide coding standards and have a reputation for providing best-of-breed product solutions.

For PRL customers, the construction of high-integrity software is critical to business success.

PRL delivers best-of-breed solutions for:

- static analysis of C, C++, Java , Fortran
- definition and enforcement of coding standards (both industry and custom)
- software quality assessment via code audit
- software metric assessment
- software process improvements

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High Integrity C++ Coding Standard

http://www.codingstandard.com

Story ID 6

VMETRO introduces next generation Data Recorders

PC based to 300MB/sec—VME based to 385MB/sec

PC-based: The Marlin Series is a family of powerful, rack-mountable, PC-based data recorders designed to be easily integrated into data acquisition systems. It is ideal for high-performance applications such as those found in surveillance, signal intelligence, telemetry as well as semiconductor and medical imaging systems. Unlike other solutions, VMETRO's data recorder families utilize flexible Fibre Channel SAN technology, allowing associated data recording environments to be easily expanded without performance degradation. The Marlin PC-based data recorder comprises VMETRO's SAN Access Software for Data Recording Environments and one or more high-performance input cards and Fibre Channel output cards.

- Sustained recording performance of 300 MB/s per channel
- Up to three channels provide aggregate performance approaching 1 GB/s
- Base storage of 584 GB easily expanded via JBOD
- Scalable SAN architecture giving virtually limitless storage capacity
- Support for a wide variety of inputs
- Compatible with VMETRO's SAN Access Software
- Disk Grouping & Intelligent Disk Management

VME based: Leveraging VMETRO's new PowerMIDAS 5000 I/O Controller, CP-MDR has been optimized for maximum flexibility and includes on-board options for dual Fibre Channel, dual Gigabit Ethernet (GbE) and/or RACE++ interface(s) without having to sacrifice available PMC sites. CP-MDR also includes VMETRO's SAN Access Software for Data Recording Environments providing advanced data recording capabilities such as remote management, disk grouping, intelligent disk management, and real-time data recording. This combination of powerful hardware and software offers a user-friendly data recording interface, and the ability to record multiple high-bandwidth streams of data with an aggregate performance of 385 MB/s.

- 385 MB/s sustained recording performance
- Real-time file system insures deterministic operation
- Read-back and reproduce supported
- Independent PCI-X bus for each PMC site
- Two PMC sites available standard. Five PMC sites available with optional mezzanine
- Compatible with VMETRO's SAN Access Kit for Data Recording Environments
- Multiple input sources supported including PMC, Ethernet, GbE, VME and RACE++
- Disk Grouping & Intelligent Disk Management.

Story ID 7

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