

Bombardier Transportation continues to integrate Kontron embedded computing technology

Kontron 6U VME computers used in latest Bombardier Transportation railway application in China



Kontron VCE405



Eching, Germany/Poway, USA, October 08, 2008 – Kontron today announced its embedded computing technology will again be integrated into another one of Bombardier’s rail system designs being developed to answer transportation needs throughout China. This is the latest development in an ongoing long-term design relationship between Kontron and Bombardier, the number one designer and manufacturer of innovative transportation solutions including regional aircraft, business jets, bus and rail transportation equipment. Bombardier has used embedded computing technology from Kontron since 1996 for the development of numerous high-profile transportation and rail control systems, including automated train cars and wayside rail projects in Dallas, Texas; Madrid; London; Singapore; Taipei and most recently, Miami, Florida.

“Kontron is Bombardier’s clear choice for embedded computing – providing reliable technology for safety critical applications that must perform flawlessly. Kontron has answered these needs expertly, quickly developing custom variations of standard COTS products to meet the changing requirements of our rail system applications,” said Gary Krivijanski, Manager, Vehicle / Signaling Procurement at

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Bombardier. "This is a competitive advantage and strength that continues to cement our relationship today, and enables our innovative people mover trains found throughout the world."

Kontron delivers extensive experience in the engineering, development, certification and manufacture of real-time embedded systems for the public transportation market, customizing COTS products to meet stringent customer requirements and reduce time to market.

"Kontron provides effective computing systems to Bombardier by taking a system-level approach to their very specific customer requirements," said Joe Eicher, Executive Director of VME Products at Kontron. "By customizing COTS solutions to provide critical safety and performance, Kontron has developed proven and highly reliable systems that meet the computing demands of Bombardier's advanced railway engineering. We greatly value our long-term relationship with Bombardier and will continue to pioneer embedded technology to meet the demands of their advanced automated trains and wayside rail projects."

Bombardier's people mover installations are typically elevated single-track loops serving small areas such as airports or theme parks and using either automated or wayside train cars. The trains rely on two sets of computing systems for redundant operation and to allow calculations performed in parallel. These advanced rail systems require a tremendous amount of communication I/O, but must be economical to meet both the performance and cost constraints of the transportation industry.

Kontron and Bombardier engineering teams have worked closely since the inception of the working relationship, with Kontron placing an engineer onsite to train Bombardier's technical lead engineer on the development environment. Kontron initially provided Bombardier with the Intelligent Serial I/O (ISO) VME card, customized to meet Bombardier's specific needs, including serial communications and cross-checking of redundant systems. The Kontron standard CPU440 and CPU540 VME processor cards were also integrated for on-board control and positive train separation in Bombardier's automated train car system applications.

Bombardier ultimately commissioned Kontron to develop the customized CPU541 VME card integrating dual processors to manage its critical safety applications and allow more passenger throughput. Kontron later optimized its VCE405 processor card, creating a 400 MHz variant for Bombardier to replace the CPU541 with added mission specific hardware and capabilities required by real-time transportation applications. Today Bombardier uses a third VCE405 to replace the ISIO VME card for communications.

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For more information on Kontron VME products, please visit <http://www.kontron.com/vme>

For more information on the Kontron VCE405, please visit

<http://www.kontron.com/products/boards+and+mezzanines/6u+vme/processor/6u+powerpc/vce405.html>

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About Bombardier Transportation

Bombardier Transportation has its global headquarters in Berlin, Germany with a presence in over 60 countries. It has an installed base of over 100,000 vehicles worldwide. The Group offers the broadest product portfolio and is recognized as the leader in the global rail sector.

About Bombardier

A world-leading manufacturer of innovative transportation solutions, from commercial aircraft and business jets to rail transportation equipment, systems and services, Bombardier Inc. is a global corporation headquartered in Canada. Its revenues for the fiscal year ended Jan. 31, 2008, were \$17.5 billion US, and its shares are traded on the Toronto Stock Exchange (BBD). Bombardier is listed as an index component to the Dow Jones Sustainability World and North America indexes. News and information are available at www.bombardier.com.

About Kontron

Kontron designs and manufactures standard-based and custom embedded and communications solutions for OEMs, systems integrators, and application providers in a variety of markets. Kontron engineering and manufacturing facilities, located throughout Europe, North America, and Asia-Pacific, work together with streamlined global sales and support services to help customers reduce their time-to-market and gain a competitive advantage. Kontron's diverse product portfolio includes: boards and mezzanines, Computer-on-Modules, HMI's and displays, systems, and custom capabilities. Kontron is a Premier member of the Intel® Embedded and Communications Alliance. The company is a recent three-time VDC Platinum vendor for Embedded Computer Boards. Kontron is listed on the German TecDAX stock exchange under the symbol "KBC". For more information, please visit: www.kontron.com.

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