



3M and Thales Computers achieve breakthrough upgrade solution: PCI Express and RapidIO implementation on standard VME64x backplane

AUSTIN, Texas and Long Beach, Calif., – Jan. 15, 2007 – Thales and the 3M Electronics unit presented a breakthrough upgrade solution for VITA 1.1 applications using the two millimeter hard metric P0 connector present in most existing VME systems today. Thales presented the solution during the “Bus and Boards” event, an implementation of the PCI Express high-speed interconnection between 6U VME boards.

Using a highly flexible and modular high speed connector technology from 3M Electronics -- the high speed hard metric (HSHM) implemented on computer boards -- Thales Computers can now offer what was once considered as impossible: a multi-gigabit per second interconnection solution compatible with the existing VME infrastructure.

“Once again the VME ecosystem demonstrated its extraordinary vitality by achieving major technology improvements while retaining backwards compatibility,” said Robert Nègre, chief technical officer of Thales Computers. “We have been working on this for quite some time now and have mastered end-to-end solutions for both RapidIO and PCI Express interconnects on the current VME64x backplane. This becomes a big asset in situations where switching to newer connector technology in the system is not an option.”

Thales Computers is already selling this technology on the PENTXM2, the first Dual-Core Intel VME Single Board Computer available on the market, and the V2PMC2, a mechanically independent VME Blade mezzanine carrier featuring dual PCI-X PMC slots. The use of a 4x PCI Express data link through P0 between the computer board and the carrier significantly expands the I/O throughput capabilities of systems using demanding I/O traffic from high-end COTS mezzanine such as FPGA or high performance network controllers.

As for the PowerPC domain, the PowerNode5 dual PPC970 computing board also uses this connector technology and a special onboard distributed RapidIO switch to implement a full mesh scalable interconnect solution on classical backplane.

Technology details: this breakthrough is achieved by using 3M's HSHM receptacle connector in a B19 configuration. HSHM is a highly flexible and modular, five Gbp/s connector system, with a industry standard 2 mm hard metric format in accordance with the IEC-61076-4-101 connector standard. The HSHM connectors use “virtual coaxial shielding” technology to provide maximum performance with minimal cross talk and skew. This allows the HSHM to plug into existing hard metric P0 connectors and support speeds necessary to achieve PCI Express or RapidIO protocols.

Details of the connector solution can be found with 3M at www.3M.com/interconnects/
Thales Computers products are on-display on www.thalescomputers.com

About 3M

3M Electronics is a leading supplier of innovative solutions to the electronics market. 3M's wide array of advanced technologies enable the company to design specialized products intended to help electronics manufacturers improve quality, reduce costs and lower emissions. The company's products help their customers connect, clean, polish, adhere, protect, transport and finish their products. 3M serves customers in numerous market segments, including semiconductor; OEM electronics; computers and peripherals; mobile and hand-held; as well as consumer, aerospace, military, automotive and medical markets. The unit is part of 3M Company's Electro and Communications Business. 3M is a global diversified technology company, serving customers in more than 200 countries with 67,000 employees. 3M's brands include Scotch, Post-it, Scotchgard, Thinsulate, Scotch-Brite, Filtrete, Command and Vikuiti. The company competes in major markets including consumer and office; display and graphics; electronics and telecommunications; safety, security and protection services; health care; industrial and transportation. For more information, including the latest product and technology news, visit www.3M.com.

About Thales

Thales is a leading international electronics and systems group, serving defence, aerospace, security and services markets worldwide. The Group employs 60,000 people throughout the world and generated revenues of \$12 billion in 2005. Thales computers include development of commercial and ruggedized VMEbus & CompactPCI multiprocessing solutions based on PowerPC and Intel microprocessors. Thales' products are optimized for a wide variety of applications in the military, aerospace, transportation, communications, and industrial markets and are used by customers worldwide, including Alcatel, Boeing, Bombardier, British Aerospace, Ericsson, Finmeccanica, Lockheed Martin, MBDA, Raytheon, Thales Group, Toshiba and others. For more information please visit our web site at www.thalescomputers.com.

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