

Themis VME Single Board Computers Selected for HAWK-AMRAAM Customizable Medium-Range Air Defense System



Themis® Computer USP IIe™ boards provide the ruggedized COTS reliability and graphics required for use in demanding mobile missile command and control systems

FREMONT, California – February 3, 2004 - Themis Computer announced the use of its USPIIe-USB™ VMEbus single-board computers by Kongsberg Defence & Aerospace (KDA) for use in the HAWK-AMRAAM Fire Distribution Center. Jointly developed by KDA and Raytheon Company, the HAWK-AMRAAM is a transportable, customizable medium air defense system that is capable of controlling and coordinating the activities of air defense weapons – interceptors and surface-to-air missiles – in a full range of air operations. Under the agreement, Themis Computer will provide the USPIIe-USB to Kongsberg Defence & Aerospace for use in mobile, land-based HAWK-AMRAAM command units.

Based in Kongsberg, Norway, KDA selected Themis' USPIIe/3GP2 boards for its HAWK-AMRAAM command and control systems. The HAWK-AMRAAM is designed to interconnect multiple radars and missile systems to a centralized fire distribution center that fires AMRAAM missiles or other types of air defense missiles. KDA selected the USPIIe/3GP2 because of its high performance 3-D graphics, early availability of 650MHz UltraSPARC® processors, conformal coating, and Themis' demonstrated support excellence.

"Our USPIIe-USB family of single board computers provides the high performance, reliability and scalability required by today's increasingly demanding COTS aerospace and defense applications," stated William E. Kehret, president of Themis Computer.

Themis Computer Press Announcement

THEMIS

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"As a supplier to Kongsberg Defence & Aerospace, with earlier board products, it's gratifying to see our latest high performance boards selected ahead of others, because our boards are ruggedized for reliability in extreme environments and because of our world class support. We continue to be focused on delivering the highest performance and highest quality embedded computers and systems commercially available," Mr. Kehret added.

Designed for configuration flexibility and high performance, Themis' USPIIe-USB boards combine the latest 650 MHz UltraSPARC-IIi processors with a local PCI bus (PMC) peripheral controller slot and a high performance bridge. The USPIIe-USB is available in one-slot, two-slot and three-slot configurations. Each of the USPIIe-USB models includes a high performance VME64 interface, a dual Ultra3 80MB/sec SCSI port, up to two 10/100BaseT Ethernet ports, and up to six RS-232 serial ports. Memory is expandable up to 4 Gbytes using memory mezzanine cards.

The USPIIe-USB/3GP2 is a three VMEbus slot configuration of the USPIIe-USB board with the optional TGA3D+ graphics accelerator, and provides users three PMC slots. This expanded I/O configuration provides AC97 audio, a second 10/100Base-T Ethernet port, two multiprotocol serial ports and a software readable front panel rotary switch. These features make it an ideal embedded processor for COTS military and telecommunications applications.

The TGA3D+ is compatible with Sun Microsystems™ XVR-500 graphics processing board and operates with Themis' new USPIIIi VMEbus computer and USPIIe-USB single-board-computer products. All graphics components, including the geometry processor, raster engine, PCI bridge and host interconnect, are included on the single slot board. The TGA3D+ board also includes a 32/64-bit, 33Mhz PMC slot, to provide additional PMC expansion options. The TGA3D+ provides exceptional geometry and texture mapping

performance, dedicated frame buffer memory support and a wide range of resolution options making it an ideal choice for demanding graphics applications, such as real-time volumetric displays.

Themis' USPIIe-USB boards and graphics adaptors support and are fully compatible with Solaris™, the industry's leading Unix® Operating System. Solaris 9, Sun's latest release, is today's preferred software development platform, with advanced multi-threading performance advantages, real-time characteristics, and a wide choice of off-the-shelf third party software. For demanding real-time applications, the USPIIe-USB also supports the latest operating system and development environment products.

Themis Computer's Environmentally Robust Servers and Single-Board Computers

Themis Computer is a leading provider of embedded computers for mission critical applications. Themis offers a broad range of compact, multi-vendor servers, including Intel, and Sun Microsystems-based dual and four-way SMP platforms, featuring rugged construction, high performance, superior scalability and ease of maintenance.

Themis provides a broad range of high performance VME and Compact PCI single board computers and graphics controllers for the embedded market. The family comprises the new USPIIIi™, USPIIe-GB™ with Gigabit interface (dual 10/100/1000 ports on the front panel), USPIIe-USB™, the USPIIe-cPCI™, TGA3D+™, and Themis' new PMC TGA-100™ graphics card. Themis' single board computers have been performance tested to MIL-S-901D, class A standards, with equipment shock loads of 40 G's.

Themis' high performance servers, single-board computers and graphics controllers are now being integrated into new communications and defense systems worldwide. The Themis Computer family of COTS VME-based boards and systems products provide increased processing power and system reliability to demanding application environments, while achieving a net reduction in total cost of ownership.

About Kongsberg Defence & Aerospace Corporation

Kongsberg Defence & Aerospace is part of KONGSBERG - a Norway based international technology corporation, focusing mainly on anti-ship missiles, command and control systems, and communications. With 1480 employees, Kongsberg Defence & Aerospace is Norway's premier defense supplier. Kongsberg Defence & Aerospace has long traditions of developing sophisticated systems in close collaboration with the Norwegian Armed Forces. KONGSBERG's anti-ship missiles, command and weapons control systems and communications systems have also proved competitive on the export market. Alliances with major foreign defense suppliers, such as Aerospatiale of France and Raytheon and Lockheed Martin of the US, constitute a key element in the company's international market strategy. For more information, please visit www.kongsberg.com.

About Themis Computer

Themis Computer is a leading developer and supplier of high performance VME and Compact PCI single-board computers, as well as systems based on ruggedized COTS motherboards and systems, for mission-critical telecommunications, military, aero-space, and industrial embedded applications. Themis provides open standards-based embedded computing platforms that support the Solaris, Linux, and Windows NT operating systems. Themis' products incorporate features designed to ensure high reliability and availability while reducing the risks of failure caused by environmental extremes. An ISO 9001 certified company, Themis Computer practices Total Quality Management (TQM) in all areas of its business, from engineering and manufacturing to customer service. Themis Computer is headquartered in Fremont, California and offers worldwide service and support. For more information please visit www.themis.com or email: info@themis.com.

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