

Themis Computer VMEbus Single Board Computers Selected for NATO E-3 Airborne Warning and Control System (AWACS) Computer



Themis® Computer USP-2™ and USPiii-1v™ provide the ruggedized COTS reliability required for NATO's demanding E-3 airborne environments

FREMONT, California – October 17, 2001 - Themis Computer announced the selection of its USP-2 and USPiii-1v VMEbus single-board computers for use in the upgrade of NATO's E-3 fleet. The NATO E-3 Airborne Warning and Control System (AWACS) fleet is a highly mobile, survivable surveillance system designed to strengthen and significantly improve air defense systems in Europe. The E-3 AWACS fills the need for both airborne surveillance and command control communications functions for NATO air and maritime forces. As an "eye in the sky," AWACS has a 360-degree view of the horizon, and can track air and sea targets simultaneously.

The Boeing Company, as prime contractor, is leading the work to develop new mission essential features for the NATO E-3 fleet. Under the Mid-Term engineering, manufacturing and development (EMD) contract, Boeing, supported by subcontractors from participating NATO nations, is integrating major system-related enhancements including; computers, displays, communications, navigation and multi-sensor integration.

Enhancements to NATO's E-3 AWACS include:

- State-of-the-art flat panel situation displays with a Windows-like environment to support the interaction between operators and sensor systems increasing the operator's situational awareness. Multi-Sensor Integration will improve the reliability and accuracy of the tracking process and target identification.

Themis Computer Press Announcement



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- Digital communications systems to improve crew access to available radio links and provide automatic record and replay of communication and display data. Satellite communications will be integrated into the mission system, offering a wider range and improved over-the-horizon communication via satellite links.
- Broad-spectrum VHF radios that will support increased operations with Eastern European nations' air and ground forces. Improved transponders will be compatible with emerging international air traffic control systems requirements.
- Upgraded aircraft navigation that takes advantage of the new Global Positioning System (GPS).

Working with the Airborne Systems Division (AS) of European Aeronautic Defence and Space Company (EADS), Themis' USP-2 was chosen to upgrade the mission computers and multi-sensor integration computers in the E-3 AWACS. The USP-2, Themis' highest performance dual-processor UltraSPARC™-based VME engine, was selected because of its high performance and scalability. As part of the selection process, the USP-2 was subjected to and passed rigorous environmental testing, including EMC/EMI, humidity, and airborne-class shock and vibration tests.

The USP-2 is a multi-slot VME module that implements a dual MP Ultra-2 architecture. Its pluggable UltraSPARC II UPA processor module from Sun Microelectronics enables performance upgrades and simplifies maintenance. The USP-2 supports both single and dual processor versions, and a single processor board can be upgraded to a dual processor system.

Themis' single VME slot USPli-1v is used to upgrade E-3 AWACS display and communications consoles. The USPli-1v combines the UltraSPARC-III, Sun Microsystems highly integrated 64-bit SPARC V9 superscalar processor, with a high speed VME64 controller. Both the value and performance of the USPli-1v are complemented by a complete set of workstation I/O features. The USPli-1v includes dual Ultra Wide SCSI ports, one 10/100Base-T Ethernet or MII port, and two RS-232 serial ports on a 6U platform. Designed for the highest level of configuration flexibility, the USPli-1v is also available in two slot and three slot versions, with expanded I/O (multi-protocol serial ports, parallel port) for computing intensive applications. In the two-slot version the USPli-1v may be configured with a Creator Graphics board (USPli-1v/2C) and expanded I/O, or with three PMC expansion (USPli-1v/2P) capability. The three-slot version (USPli-1v/3) offers three PMC slots, Creator Graphics and expanded I/O. The three-slot configuration (USPli-1v/3) meets the speed, I/O, and graphics requirements for airborne operator workstations.

The Boeing Company

The Boeing Company [NYSE: BA] is the largest aerospace company in the world and the United States' leading exporter. Boeing also is the world's largest manufacturer of commercial jetliners, military aircraft and satellites and the largest NASA contractor. The company's capabilities in aerospace also include rotorcraft, electronic and defense systems, missiles, rocket engines, launch vehicles, and advanced information and communication systems. The company has an extensive global reach with customers in 145 countries and manufacturing operations throughout the United States, Canada and Australia. As of March 2001, Boeing and its subsidiaries employ approximately 198,800 people. Total company revenues for 2000 were \$51 billion.

EADS Company Information

EADS European Aeronautic Defence and Space Company is Europe's premier aerospace and defense company and No. 3 worldwide. EADS comprises the activities of the founding partners Aerospatiale Matra S.A. (France), Construcciones Aeronáuticas S.A. (Spain) and DaimlerChrysler Aerospace AG (Germany). The company is listed on the Frankfurt, Madrid and Paris stock exchanges.

EADS operates on a worldwide basis. It is a partner in a large number of international collaborations and alliances e.g. Airbus, Ariane, Eurofighter, Eurocopter. Today, EADS is the largest European aerospace company and an important international partner in the aerospace industry, a leading global player, and the overall system coordinator for a range of complex technological projects. The Airborne Systems Division (AS) of EADS was selected to contribute work packages for the E-3 upgrades; the Multi-Sensor Integration Tracking and Identification Software as well as the AWACS Mission Computer and the Multi-Sensor Integration Computer Hardware.

About Themis Computer

Themis Computer is the leading developer and supplier of ruggedized high performance VME single-board computers and systems for military/aerospace, telecommunications and industrial embedded applications. Themis' products incorporate features designed to ensure high reliability and availability while reducing the risks and costs 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 the Silicon Valley and offers worldwide service and support. For more information please visit www.themis.com or email: info@themis.com.

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