Dedicated Systems' News

Issue # 9
October 2006

4Gbps Multi Protocol Analyser

Fiber Channel—Gbit Ethernet—SATA SAS—Serial FPDP—iSCSI—custom

Absolute Analysis and Dedicated Systems sign distribution agreement

Inside this issue:

Absolute Analysis is a leading provider of computer bus analyser equipment through its Axiom Series of analysers and traffic generators. The current products provide analyser support for Fibre Channel, Serial FPDP, iSCSI and Gigabit Ethernet. Each channel on the card can be independently configured on the fly to support any of these. Coupled with a proprietary design for concurrent analysis and traffic generation on the same card, the Axiom series analysers give the engineer unparalleled power and flexibility from a single piece of hardware.

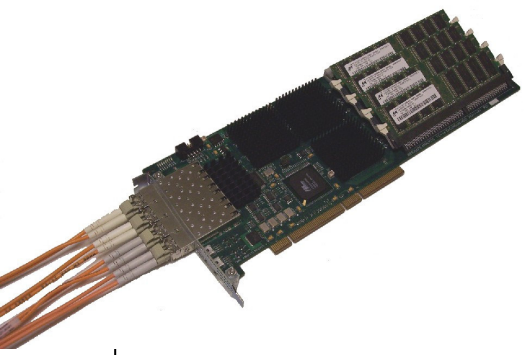
At the heart of the Axiom Series analyser is the advanced Protocol Analyser Engine with speeds up to 4.0Gbps which is combined with Absolute Analysis's sophisticated and easy-to-use Investigator software. A Traffic Generator is also available, enabling both analysis and generation on a single piece of hardware.

- Most powerful yet simplest to use GUI
- Multi-Protocol support for Gigabit Ethernet, iSCSI, Fibre Channel, SATA, SAS
- Protocol-on-Demand™ Dynamic Protocol Configuration technology
- Trace Viewer software decodes over 30 industry standard protocols, including as FC-VI, FCP-CSI, FC-SB-2, IP, TCP, VoIP and iSCSI
- Edit or Add to a current protocol or create a new one using our proprietary Decode-on-Demand.
- Set complex trigger and filter combinations, including performance data, using our Smart Trigger™ technology
- Systems can be scaled for up to 8 boards and 32 channels of concurrent analysis and full line rate traffic generation, insuring plenty of capacity

Traffic on Demand

Axiom Analysers contain a unique, technically advanced method of allowing both analysis and traffic generation to occur simultaneously, all on the same card, called Traffic-on-Demand™. Each channel is controlled through an unique Traffic Generation GUI, allowing the user complete control of every port. You can set the speed and the protocol for each individually, enabling complete flexibility in controlling the configuration. Traffic-on-Demand™ also contains various functions that are available to check different parts of the device under test. A variety of traffic loads can be introduced into the traffic, with the ability to inject a deterministic error. Users transmit worst case data paths over the optical and copper cabling in order to stress test the infrastructure.

Error generation is also possible within the traffic generation capabilities through CRC within frames. Corrupt frames can be introduced into the traffic, allowing the user see their system's response. This provides a mechanism to develop specific, repeatable test cases for software and hardware debugging.

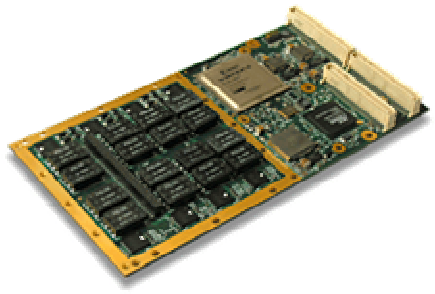


SCHROFF 6U and 8U µTCA Development Systems

The 8U µTCA Development System is ideal for early adopters and developers of µTCA systems and AdvancedMC boards.
The backplane supports 10 AMC Modules, 2 MCH Slots and 2 Power Connection Modules. Special versions of the µTCA backplane are also available. The integrated power bay accommodates dual, hot-swap, 300 watt modules for up to 600 Watts . Cooling is accomplished with three DC fans on a plug-in fan tray, front air intake and an easily removable air filter.

- µTCA System, 6U and 8U, 316mm deep *ratiopac*PRO case with front handles
- Card cage for Double Width or Single Width AdvancedMC modules
- Support for mixed Single and Double Width modules accommodated with splitter adapters (supplied with system)
- µTCA Backplane, 14 slot **(2+2+10**, 2x Power module slots, 2x MCH slots, 10x AMC slots) or 16 slot **(2+2+12**, 2x Power module slots, 2x MCH slots, 12x AMC slots) also available
- Active heat dissipation (front air intake, rear exhaust)
- Hot-Swap fan tray with 3 DC fans, 12V, temperature controlled by temperature sensor
- Front removable air filter
- AC Input

Condor Engineering introduces 8 channel PMC 1553 Card for commercial and extended temperature applications



Condor Engineering has announced the release of the EPMC-1553, its new, 8-channel, high-density PMC card for MIL-STD-1553B Notice II, available in commercial, ruggedized and conduction-cooled configurations. Designed specifically for embedded applications, Condor's new EPMC-1553 provides the highest levels of performance, flexibility and interface density for MIL-STD-1553B in the PMC (PCI Mezzanine Card) form factor.
Available in configurations with 1, 2, 4 or 8 dual-redundant, fully compliant 1553B/1760 interface channels, the EPMC provides 128 Kbytes of RAM per channel, along with 8 bi-directional avionics-level and 8 RS-485 differential discretes. All channels are multi-function, supporting simultaneous operation of a Bus Controller (BC), (1 or 31) Remote Terminals (RT), and Bus Monitoring (BM). An IRIG-B Receiver/Generator option is available.
The Condor EPMC-1553 card is designed to industry standard conduction-cooled specifications, and is also available in commercial and extended temperature configurations. The high channel count density and integrated discretes allow the system designer to reduce the overall system footprint (slot count) while reducing power consumption. I/O connections are available from either the front bezel or via the P14 connector. Also included with the EPMC-1553 is CORE-API, a flexible, easy-to-port API provided in source code. Board support packages for Windows XP, 2000, Me, NT, 98, 95, and VxWorks are provided.

New cPCI Express Backplanes and Chassis

CompactPCI Express supports the next generation Intel PCI Express architecture in the familiar Eurocard form factor. CompactPCI Express connects cards via a serial point-to-point bus with a read-only bandwidth of up to (16x) 2.5 Gigabits/second or (8x) 2.5 Gigabits/second full duplex bandwidth. CompactPCI Express provides support for several different card form factors with connectivity in 1x, 2x 4x, and 8x increments. Each link represents one full duplex 2.5 Gigabit/second interconnect path. The support of legacy 32 or 64 bit CompactPCI boards is accomplished by a PCIe to PCI-X bridge. CompactPCI boards of 33MHz, 66MHz, or 133MHz are possible. Because the CompactPCI Express architecture continues to support the P3, P4 and P5 in all 6U slot types, CompactPCI Express can continue to support all existing CompactPCI secondary architectures such as PICMG 2.16, either as functions on native CompactPCI Express cards or as legacy cards in the original CompactPCI form.

Elma also has a development chassis for CPCI Express:

- 4U x 84HP x 290mm (H x W x D)
- Advanced EMC shielding to meet CE, FCC and NEBS
- 4-slot cPCI Express (EXP0) Backplane
- 47 pin plug-in 250W cPCI power supply
- Cooling bottom to top (1 x 90 CFM)

Vanguard Express PCI Express Protocol and Link Analyzer for AdvancedMC (AMC)

The Vanguard Express AdvancedMC is a self contained unit that installs between the device under test and the host system and allows testing with minimal intrusion to the system under test. The Vanguard Express AdvancedMC is operated via USB or Ethernet while using VMETRO's BusView 5 GUI.

At the heart of the Vanguard Express AMC is the unique Serial Analyzer Engine module (SAE). The SAE can be used on various adapters providing PCI Express Analysis in multiple form factors. This makes the Vanguard Express the most flexible and cost-effective PCI Express Analyzer on the market!

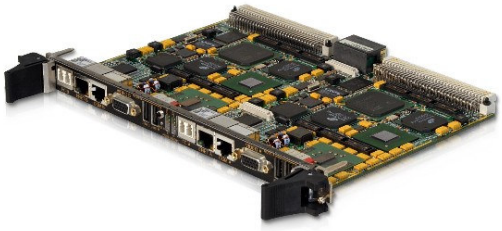
For ease of use and to increase productivity, the Vanguard Express Analyzers and BusView 5 include protocol decoding as well as display trace data in multiple views. The PCI Express protocol is decoded throughout the user interface including setup screens, trace displays, statistics and all utilities. The user can arrange trace data in chronological order or grouped as link or split transactions for improved readability. Other unique trace views are available including data, packet details or lane views making data easy to read and interpret for all users, regardless of expertise and task.

Real Time Performance Analysis is also included with the Vanguard Express AMC Analyzer. The Vanguard Express statistics engine offers concurrent real-time measurements including Event Counting, Link Utilization, PLP Distribution, TLP Distribution, DLLP Distribution, Payload Length Distribution and Transfer Rate. In addition, post processing statistics are generated on any acquired trace data using the Trace Count feature which calculates performance information based on trace samples of interest.

Automatic error detection is performed by the Vanguard Express AdvancedMC's onboard protocol checker. The protocol checker aids the user in tracking down link hardware errors and logical faults without the need to understand the nature of the problem. Each error includes online help to assist with debugging.

VXS SBC functions as two boards in one slot

Redundant computing nodes are vital for many mission-critical defence applications. That used to mean two or more separate boards, taking up extra backplane slots. **General Micro Systems** offers a way to do that using just a single board. A VXS 4.3-based processor board, the new V469 Patriot, replaces anywhere from two to four VME boards. This 6U board is a true dual-processor architecture, with each processor sharing absolutely nothing with the other processor, as if they were in two different VME slots. The two processors are linked together with the Gigabit Ethernet or may be linked via VITA 41.3 VXS, thus providing a massive server density unlike any other technology. To provide even more processing muscle at lower power, the new dual core processors will be used to provide quad-processing capabilities. The V469 utilizes two of the new M-760 Pentium M processors, each operating at 2.0 GHz with 2 Mbytes of L2 Cache and 533 MHz FSB. The V469 provides up to 8 Gbytes of 266 MHz RDDR memory with ECC. Standard I/O functions on each side of the Patriot include: dual Gigabit Ethernet ports with Copper or Fiber interface, 2 Gbit, full duplex Fiber Channel with 2 Mbytes of SRAM buffer and Flash BIOS to support Boot capabilities, quad USB 2.0, dual Serial ports, XVGA Video and UDMA IDE interface. An optional I/O interface module allows one CompactFlash and one USB 2.0 device to be added to each side.



The board has software support for Windows®2000/XP, VxWorks®, Solaris®x86, QNX® and Linux®

The board is available in standard, 0° C to +60° C or extended temp -20° C to +80° C.