



## **Frequently Asked Questions**

### **Embedded Systems Conference Silicon Valley 2009**

#### **What's new for Performance Technologies this year at ESC?**

There are two primary product areas that we are showcasing this year at ESC. The first is the introduction of our new MicroTCA™ system, and the second, which is part of our new lineup of MicroTCA systems, is our growing, extensive suite of software offerings.

#### **What's new about your MicroTCA systems?**

This year, we are expanding on the launch of last year's award-winning MicroTCA system, the MTC5070, with the introduction of our IPnexus® AMP5071. This new, 1U MicroTCA system offers significant improvements in our lineup of MicroTCA solutions. For starters, instead of a chassis-only approach, we are rolling out a complete, application-ready system.

#### **How are you defining "complete, application-ready?"**

We've defined complete, application-ready for this new MicroTCA system to mean just that: open up the box and start developing your application. The AMP5071 includes an AdvancedMC™ processor module of the customer's choice – either an Intel® Core™ 2 Duo processor or a Freescale™ MPC8641D dual-core 1 GHz PowerPC® processor. This "complete" system also comes loaded with NexusWare®, our OS and development environment.

#### **What exactly is NexusWare®?**

NexusWare is our comprehensive suite of Carrier Grade Linux® (CGL) OS and development environment, middleware, and WAN radar protocols.

#### **Other companies make software, what makes NexusWare special?**

Good question. Our NexusWare is more robust than people realize. There are only three companies in the world that have a Carrier Grade Linux with a 4.0 Registration from the Linux Foundation, and Performance Technologies is one of them. In addition, we've taken this a step further – we have "finely tuned" our NexusWare to be tightly integrated with our complete lineup of MicroTCA and CompactPCI® systems. This makes us the only company in the world that manufactures/produces completely integrated systems with its own CGL 4.0 software. NexusWare includes a pre-ported Linux® kernel, a complete suite of GNU/EGCS cross-development tools (CDT), compilers (C, C++), debuggers, profilers, libraries, and embedded tools that build software images for the embedded targets. NexusWare comes complete with IP protocols and other software tools. These software features significantly speed system integration and ultimately help accelerate time-to-market.

#### **Is there anything new that you are showing with NexusWare?**

Yes, two developments. The first is NexusWare Portal, a web-based management and development tool used to remotely manage, monitor, diagnose, and maintain our MicroTCA systems operations. This comes standard with our new AMP5071. The second is our NexusWare SIP Software Stack, delivered as an installable software package and is compliant with specification RFC3261 for SIP to ensure interoperability and effortless integration.

#### **Why this approach of integrated systems and software?**

We've heard feedback from our customers that they need more than just a box, they need something that is fully developed and ready to go.

#### **How so?**

Given the current economic situation that all companies are facing, finding new ways to save on bottom-line resources as well as improve time-to-market metrics is more critical than ever. Any way to improve upon cost savings in a new product rollout needs to be considered, and our complete, application-ready solutions can help in these efforts.





### **So you're saying the combination of your new MicroTCA™ systems and software is actually going to help IP-communication equipment manufacturers save money?**

Yes. When you look at the true cost of time and materials involved with ramping up a ready-to-develop system complete with integrated processor, along with a robust OS, and remote management capabilities – now that's a significant investment for any company. We've taken all of these vital hardware and software requirements and designed our AMP5071 to be operational, right out of the box.

### **How else will the AMP5071 help companies to achieve cost savings?**

Our design philosophy for our MicroTCA solutions is to provide maximum performance at an affordable price point. In our revolutionary MicroTCA system design, by moving the infrastructure functions away from the payload area, we've eliminated the need for the costly front plates, connectors, and extra printed circuit boards associated with modular MCHs and power supplies. Secondly, our enterprise-server class power supplies have very high MTBF ratings, they are also much more common than MicroTCA-specific power supplies from other providers, and take advantage of economies of scale to reduce overhead costs. Furthermore, modular MCH and power supply units need to be designed to support up to 12 AMC modules which, in a compact system that may only contain 4-6 AMCs, can represent overkill. The MCH and PSU functions in our MicroTCA solutions are designed to the scale of the systems with no wasted functionality.

### **What else is new about the AMP5071?**

High-reliability and high-performance. Four-nines of availability is achieved with redundant and hot-swappable power supplies and fan trays. The same fan tray FRU operates in either the front or the back to minimize sparing costs. For applications that require high-performance connectivity, the AMP5071 features dual 1 GbE Ethernet and x4 PCI Express® lanes to each slot. Storage is accommodated by direct SATA/SAS slot-to-slot connections between the AMC sites. The onboard platform management subsystem provides MicroTCA-compliant carrier and shelf management. Non-payload functions, such as the Ethernet switch, PCI Express switch, and carrier/shelf manager are integrated into the rear of the chassis, thus eliminating the overhead costs associated with standard MCH modules. The front I/O panel features LEDs (in-service, out-of-service, and user-defined), a reset switch, and a platform management console port. The back panel has quad 10/100/1000 Mb Ethernet uplink ports, a 10/100 Mb Ethernet out-of-band platform management port, power input, and a power switch.

### **How many payload slots are available in the AMP5071?**

The payload bay of the AMP5071 can support up to six mid-size single modules, and is flexible to support all AMC module configurations including full-size and/or double modules. The application-ready system supports all AMC form factors and is fully compliant with MicroTCA.0, AMC.0, AMC.1, AMC.2, and AMC.3.

### **How else is the company supporting its MicroTCA offerings?**

We are continuously helping our customers find new ways to process data, store it, and transmit it through our ever-growing list of supporting AMC modules. Our wide range of AMC modules for compute, storage, and I/O functions, create a virtually endless set of AMC combinations to meet the needs of our MicroTCA customers, both now and in the future.

### **Where are you seeing traction for MicroTCA?**

We are seeing significant interest in MicroTCA in diverse settings. Besides the traditional telecommunications-specific applications such as support for ACTA systems, WiMAX, and LTE designs, we are also getting requests for our MicroTCA solutions in IT, data communications, scientific, as well as Aerospace and Defense communication applications.

### **Where can I learn more?**

Additional information on our new MicroTCA system can be found at <http://go.pt.com/amp5071>. Information on our other products can be found at <http://go.pt.com/embedded>.

