PICMG Enhances Hardware Platform Management (HPM) Specification to include LAN-attach Support for xTCA Management Controllers

WAKEFIELD, Mass., February 26, 2013 – PICMG, a leading standards organization for the communications, military and embedded computer industries, is pleased to announce the adoption of two new specifications in the hardware platform management (HPM) series that standardize connections to in-shelf LANs for the mandatory management controllers on xTCA boards and modules. Hardware platform management focuses on fundamental aspects of the xTCA hardware, including: collecting inventory data, budgeting power, tracking and responding to temperature events, and brokering high-speed fabric connections for xTCA systems. xTCA includes the AdvancedTCA, MicroTCA and AdvancedMC open module frameworks. The new specifications further improve the performance, robustness, high availability and serviceability of xTCA platforms by taking standardized advantage of existing in-shelf LANs for hardware platform management purposes.

HPM.2 defines how xTCA management controllers can connect with the LAN facility(s) that already exist in xTCA shelves, such as the gigabit-Ethernet Base Interface that connects all the boards in an AdvancedTCA shelf. These LAN connections are dramatically faster than the mandatory 100 kbps Intelligent Platform Management Bus (IPMB) links in the base xTCA architectures. The extra speed is especially beneficial for large transfers, such as firmware upgrade images using protocols standardized by the existing HPM.1 specification. HPM.2 further improves serviceability by defining how to use those LAN connections to provide remote diagnostic visibility into the operation of the shelf, including serial port traffic and Intelligent Platform Management Interface (IPMI) messaging in a shelf. Such visibility can drastically reduce the cost and time required to diagnose issues in an operating shelf, whether in a lab or at a remote field location.

HPM.3 complements HPM.2 by standardizing a vendor-independent method for assigning Internet Protocol (IP) addresses to HPM.2-capable management controllers via the Dynamic Host Configuration Protocol (DHCP). A large, distributed xTCA application can include hundreds or thousands of management controllers and all LAN-attached controllers must have unique IP addresses. HPM.3 can substantially reduce the challenges of implementing these address assignments in a reliable and consistent fashion, even for a mixed vendor configuration.

“HPM.2 and HPM.3 further strengthen the hardware platform management layer of the xTCA open modular equipment frameworks, which is already playing a crucial role in the widespread adoption of
XTCA around the world, especially for AdvancedTCA in telecommunications and military applications, said Mark Overgaard, Chairman of the HPM.x subcommittee and Founder/CTO of Pigeon Point Systems. “Development and operational users of HPM.2- and HPM.3-capable xTCA systems can achieve order of magnitude better performance for management operations such as firmware upgrades, better diagnostic visibility into system operation and simplified logistics for IP address management, all on the standardized, vendor-independent basis that PICMG and the xTCA ecosystem do so well.”

Hardware Platform Management is a basic technology required to build high availability systems, which can continue to operate when hardware or software failures occur by switching tasks to redundant or still available resources. PICMG leads the industry in the development of platform management standards and high availability architectures, which are becoming the preferred choice for designers of critical military, communications, industrial and medical computer systems.

ABOUT PICMG

Founded in 1994 as the PCI Industrial Computer Manufacturers Group, PICMG is a consortium of over 250 companies that collaboratively develops open specifications for high performance telecommunications, military and industrial computing applications.

For information about PICMG membership, or to find out how to obtain PICMG specifications, visit the PICMG website at http://www.picmg.org or call PICMG headquarters at (781) 246-9318.