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## **Altera and PMC-Sierra Introduce Multi-Serial Protocol Development System**

*System Supports Emerging Wired and Wireless Industry Specifications Including PCI Express, OBSAI, and CPRI*

**Santa Clara, Calif., May 31, 2005**—Altera Corporation (NASDAQ: ALTR) and PMC-Sierra (NASDAQ: PMCS) today announced the availability of a jointly developed multi-serial protocol development system. The development system incorporates Altera's Stratix<sup>®</sup> II EP2S90 FPGA and PMC-Sierra's PM8358 QuadPHY 10GX serializer-deserializer (SERDES) transceiver for rapid prototyping of high-performance backplane and line interface solutions, including wireless base station backplanes. In addition, the development system supports emerging serial protocols with rates from 1.2 to 3.2 Gbits per second (Gbps) such as PCI Express, Open Base Station Architecture Initiative (OBSAI), and Common Public Radio Interface (CPRI).

“This multi-serial protocol development system offers engineers a time-to-market advantage for their PCI Express and base station designs,” said Travis Karr, director of marketing at PMC-Sierra. “The combination of PMC-Sierra's high performance SERDES products and Altera's high-density Stratix II FPGAs provides a cost effective solution with guaranteed serial performance.”

The serial protocol development system allows PCI Express developers to deliver PCI Express x4 end point or bridge applications. In addition, the multi-protocol serial development system incorporates the clocking distribution circuitry required by the OBSAI and CPRI standards.

“Altera's partnership with PMC-Sierra enables our customers to deploy serial links across networking, storage, computing, and wireless applications,” said John Sakamoto, senior director of Altera's Wireline Business Unit. “The high density and programmability of our Stratix II FPGAs provide the flexibility required to meet rapidly

changing industry specifications, while offering a migration path to our HardCopy® II structured ASICs for high-volume production.”

The serial protocol development system board has a PCI Express edge connector and a Tyco HM-Zd connector, with eight serial lanes from both connectors interfacing to two QuadPHY 10GX SERDES devices. Two QuadPHY 10GX devices interface to the Altera® Stratix II EP2S90. The Stratix II provides an interface to a memory module. The Stratix II also provides an LVDS interface to a HM-Zd connector for applications such as SPI-4.Phase 2. Additional protocols that can be implemented using this development system include Serial RIO, InfiniBand, XAUI, and 10 Gigabit Fibre Channel. This development system may be configured as an end point solution or as a bridge solution for all of these serial protocols.

The multi-serial protocol development system will be showcased by PMC-Sierra in booth 59078 at SUPERCOMM 2005, June 6 to 9, in Chicago. The demonstration will show designers how to create an x4 PCI Express end point or bridge application as well as create a PCI Express to 10 Gigabit Ethernet bridge.

### **Availability**

Information regarding the Stratix II and associated FPGA code is available at <http://www.altera.com/>. Information regarding the QuadPHY 10GX and multi-serial protocol development system is available at [www.pmc-sierra.com/serdes/Serial\\_Protocol\\_Development\\_System.html](http://www.pmc-sierra.com/serdes/Serial_Protocol_Development_System.html).

### **About Altera**

Altera Corporation (NASDAQ:ALTR) is the world's pioneer in system-on-a-programmable chip (SOPC) solutions. Combining programmable logic technology with software tools, intellectual property, and technical services, Altera provides high-value programmable solutions to approximately 14,000 customers worldwide. More information is available at [www.altera.com](http://www.altera.com).

### **About PMC-Sierra**

PMC-Sierra™ is a leading provider of high speed broadband communications and storage semiconductors and MIPS-Powered™ processors for Enterprise, Access, Metro

Optical Transport, Storage Area Networking and Wireless network equipment. The company offers worldwide technical and sales support, including a network of offices throughout North America, Europe and Asia. The company is publicly traded on the NASDAQ Stock Market under the PMCS symbol and is included in the S&P 500 Index. For more information, visit [www.pmc-sierra.com/](http://www.pmc-sierra.com/).

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