



Annapolis Micro Systems, Inc. Announces the Delivery of the World's First COTS Board Capable of Capturing and Processing Multiple 100 Gbit Signals in Real-Time

Made Possible by the 11.3 Gbps High-Speed Transceivers in Altera's Stratix IV FPGA

Annapolis, Maryland – April 16, 2011 – Annapolis Micro Systems, Inc. (Annapolis), the leader in Commercial Off the Shelf (COTS) Field Programmable Gate Array (FPGA) Based High Performance Computing, announces the successful and on-schedule delivery of the World's First COTS Board capable of Capturing and Processing Multiple 100 Gbit Signals in Real-Time, made possible by the 11.3 Gbps High-Speed Transceivers in Altera's Stratix IV FPGA. The Annapolis Dual 40/100Gbit CFP Transceiver Board for IBM BladeCenter enables the capture and real-time processing of massive amounts of data for Network Security, Signal Intelligence and Data Mining applications. Annapolis was able to develop this product by leveraging the incredible bandwidth possible in the Altera (Nasdaq: ALTR) Stratix® IV FPGAs.

"Altera continues to align with the Intelligence community ecosystem in providing innovative programmable and IP solutions meeting the high-end demands of intelligence applications," said Amr El-Ashmawi, strategic business and Market development business unit, Altera Corporation. "Our industry-leading transceiver technology and high-speed Ethernet IP solutions combined with Annapolis's system and

board-level solutions enable the delivery of a high-speed Network Processing platform capable of 240-Gbps performance.”

Annapolis integrated two CFP interfaces into their Dual 40/100Gbit CFP Transceiver Board, allowing the capture, buffering and processing or transmission of two 100Gbit Ethernet streams per card or six 40Gbit Ethernet streams per card. The Dual 40/100Gbit CFP Transceiver Board’s CFP transceiver cage interfaces can support 100Gbit Ethernet, 40Gbit Ethernet, 100Gbit OTU4, 40Gbit SDH/OTU3 and QDR Infiniband protocols.

Using one or two Altera Stratix IV GT EP4S100G5 FPGAs, up to 36 GBytes of DDR3 DRAM arranged as up to eight 72-bit ports and a 160x160 High-Speed crossbar, the Dual 40/100Gbit CFP Board is able to buffer and, if desired, preprocess all the data at full rate from the CFP interfaces before it is sent on to Annapolis’ WILDSTAR 5 Blade for IBM BladeCenter. The Dual CFP Transceiver Board mates directly to the WILDSTAR 5 Blade for IBM BladeCenter with an incredible 68 High-Bandwidth Full Duplex Serial I/O connections. This allows the full bandwidth of received data (up to 240Gbit/s) to be sent to and processed by the up to eight FPGAs or Tilera Network Processors available on the WILDSTAR 5 Blade for IBM BladeCenter, in real time without the need for data filtering or reduction.

The Dual 40/100Gbit CFP Transceiver Board includes Ethernet MACs for 40Gbit and 100Gbit Ethernet as well as full standardized board support VHDL models, drivers and APIs.

“The integrated 11.3 Gbps high-speed serial interfaces as well as Altera's high-speed Ethernet IP solutions featured in Stratix IV FPGAs were the only possible solution to meet our customers' bandwidth and performance needs,” said Paul Kowalewski, General Manager for Annapolis Micro Systems, Inc. “We are very pleased with the support we received from Altera while developing this product on such a tight schedule.”

Pluggable CFP Transceivers can be purchased to support 100Gbit or 40Gbit Ethernet (802.3ba), 100Gbit (OTU4) and 40Gbit (SDH/OTU3) for Telecommunications, Tri-Channel 40Gbit Ethernet streams, or for QDR Infiniband streams.

The IBM BladeCenter is a powerful, thoroughly integrated platform that provides the highest thermal and power capacities in the industry today. Its intelligent system design with multiple layers of redundancy, single point of control management, powerful processor blades and the ability to insert additional blades when needed, provides the perfect foundation for a heterogeneous processing platform to run compute intensive applications. Within the WILDSTAR 5 Blade itself, the architecture provides the ultimate in bandwidth, scalability and modularity to provide solutions for the most complex real-time signal processing or advanced networking problems.

About Annapolis Micro Systems, Inc.

Annapolis Micro Systems, Inc., in business since 1982, has been at the forefront of providing industry leading FPGA Processing Solutions since 1994. Annapolis excels at providing the application developer with everything needed to fully use the power of FPGA processing to solve very demanding real-time data capture, processing and storage problems. The WILDSTAR product line includes FPGA processing boards for IBM BladeCenter, PCI Express, VME, VXS, Open VPX and AMC. This includes a continually expanding line of superior Analog to Digital, Digital to Analog and High-Speed Communication Solutions. New mezzanine cards and on-board I/O carry forward the Annapolis WILDSTAR system strategy of providing End-to-End Input, Processing and Storage options.

The customer can develop his/her application using their preferred FPGA application design methodology. Annapolis provides standard source code VHDL board support packages, drivers and APIs.

Annapolis also provides its CoreFire FPGA Design Suite. CoreFire, with its GUI based design entry, patented dataflow methodology and extensive highly optimized intelligent IP & Board Support Libraries, results in very fast, tight designs within a dramatically small amount of time. The combination of Annapolis COTS systems with the CoreFire Design Suite enables Annapolis customers to field full systems while their competitors are still debugging preliminary FPGA designs.

Some typical application areas include Network Processing, SIGINT, COMINT, SW Radio, RADAR, Image Processing, Encryption, and Data Mining.

Annapolis is famous for the high quality of its products and for its unparalleled dedication to ensuring that the customers' applications succeed. They offer training and exceptional custom application development support, as well as more conventional customer support.

For more information about the WILDSTAR Family, the CoreFire Design Suite, or other Annapolis products in the USA, contact Pat Stover at (410) 841-2514, patrick.stover@annapmicro.com. For European Sales and Support, contact Noah Donaldson in Stockholm, Sweden at +46 708 453 203, noahd@annapmicro.com. For more information about Annapolis Micro Systems, Inc. contact Jane Donaldson at (410) 841-2514, jdonald@annapmicro.com. Website is www.annapmicro.com

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