

Annapolis Micro Systems

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**Universal 3Gbit IO**

Annapolis Micro Systems, Inc. is a world leader in high-performance, COTS FPGA-based processing for radar, sonar, SIGINT, ELINT, DSP, FFTs, communications, Software-Defined Radio, encryption, image processing, prototyping, text processing, and other processing intensive applications. The Annapolis Universal 3Gbit IO Card provides up to 36 Gb full-duplex I/O directly between the outside world and the Rocket I/O pins on the Xilinx Virtex-II Pro FPGA processors. No other vendor provides that volume of data straight into the heart of the processing elements and then back out again. The card has three individually configurable, industry-standard 4x connectors, providing four lanes per connector, with dedicated signal conditioners to ensure clean communication. It supports a wide variety of readily available cables: copper for short haul (.3-5 m) or fiber for long haul (10-300 m). Two I/O cards can reside on each WILDSTAR II Pro or WILDSTAR II FPGA-based VME or PCI board with up to 30 million user reprogrammable gates.

Initial release of the Universal 3Gbit Card will come with an easy-to-use Rocket I/O protocol supporting up to 12 Gb full duplex per connector. Available protocols are up to 10 G full-duplex InfiniBand per connector, up to 10 G full-duplex Ethernet per connector, and Serial FPDP. Although the InfiniBand, Ethernet, and Serial FPDP protocols will be provided as black-box solutions with few modifications by users allowed, more adventurous users who choose to develop their own communications protocols from the basics already have access to all the board resources through a VHDL source for the interfaces to SRAM, signal conditioners, LAD bus, I/O bus, and PPC flash. CoreFire users will have the usual CoreFire board support package.

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

**FEATURES:**

- Up to 12 Gb full-duplex Rocket I/O per connector
- Up to 10 Gb full-duplex InfiniBand per connector
- Up to 10 Gb full-duplex Ethernet per connector
- Three individually configurable 4x connectors – four lanes per connector
- Three fundamental oscillators – 100.00 MHz, 125.00 MHz, and 156.25 MHz
- One Xilinx Virtex-II Pro 70-5, -6 or -7, or Industrial 70-5I or 70-6I
- Up to 4 GB DDR SDRAM in four banks
- Two PowerPC 405s in FPGA with onboard flash for program storage
- JTAG, ChipScope, and serial port access
- Proactive thermal management system
- Available in both commercial and industrial temperature grades
- Includes one-year hardware warranty, software updates, and customer support