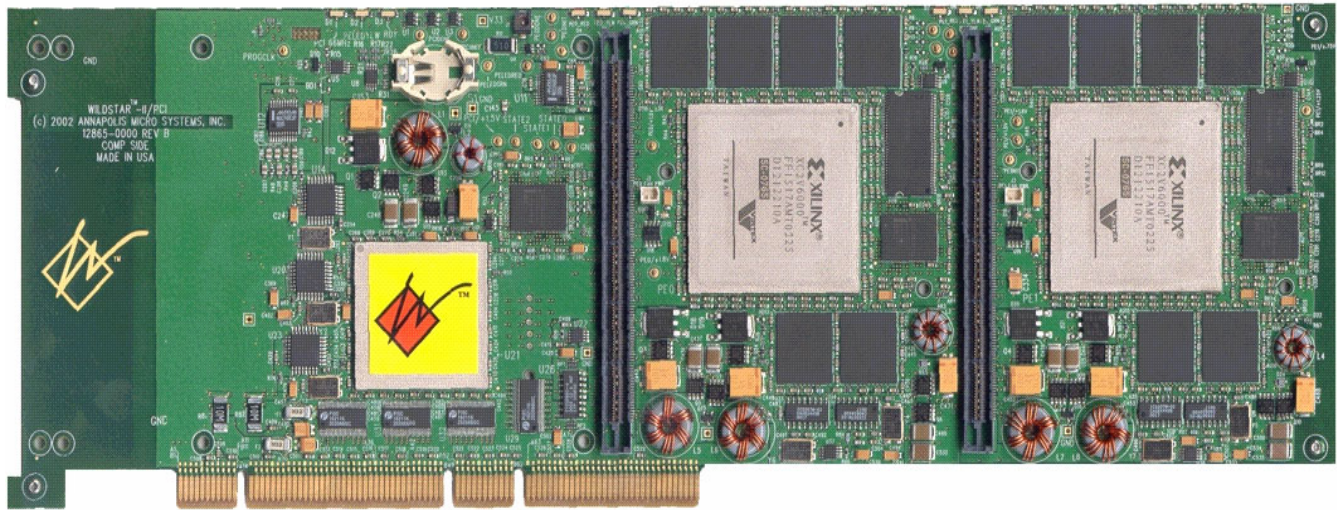


Data Sheet  
Doc # 12937-0000, Rev 1.5

# Annapolis Micro Systems, Inc.

## WILDSTAR™ II for PCI

### Virtex™ II Based Processor Board - Up to 16 Million Gates



#### FEATURES

- 1 or 2 Virtex™ II FPGA Processing Elements
  - XC2V6000 or XC2V8000
- Up to 48 MBytes DDR2 SRAM in 12 Banks
- Up to 256 MBytes DDR SDRAM in 2 Banks
- Programmable FLASH for each FPGA to Store FPGA Images
- PCI Bus - Rev 2.2
  - 32/64 Bits, 33/66 MHz
- High Speed DMA Multi-Channel PCI Controller
- Host Software : NT 4.0, Win2000, Linux, Solaris, IRIX - API and Device Drivers
- Full CoreFire™ Board Support Package for Fast, Easy Application Development
- VHDL Model
- Accepts 1 or 2 COTS Highspeed WILDSTAR™ I/O Cards - 1.5 GHZ A/D, Quad Fibre Channel 2, WSDP™, FPDP, LVDS, Quad Gigabit Ethernet, and More

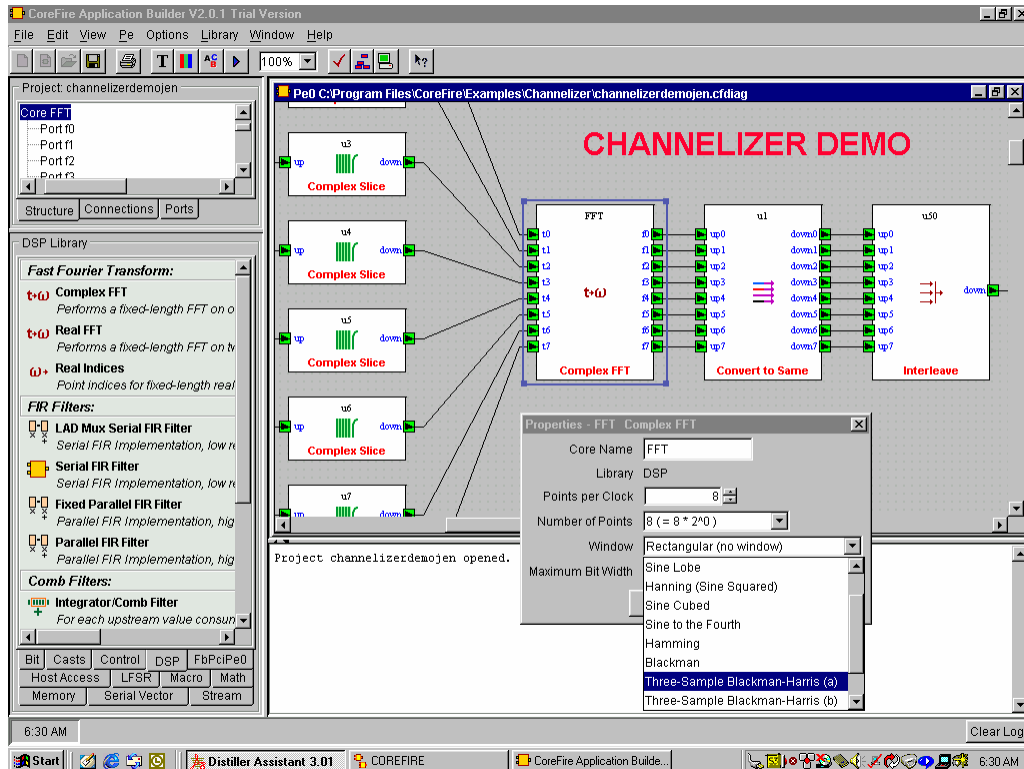
#### BENEFITS

- Reduce Risk With Our 8th Generation of COTS (Commercial Off the Shelf) FPGA Based Processing Boards
- Save Time and Effort - Develop Your Application Very Quickly and Easily with CoreFire™
- CoreFire™ Provides Proven, Reusable, High Performance IP Modules, Including Some of the World's Fastest FFTs and Filters
  - Standardize and Control Your Team's Development
- Achieve World Class Performance
- WILD™ Solutions Outperform the Competition
- WILDSTAR™ II for PCI with 1 I/O Card Fits in Single PCI Slot - 2nd I/O Card Uses 2nd Slot
- Training Classes and Application Support



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# CoreFire™ Ready – Create and Run Designs on Day 1!



All WILDSTAR™ II boards are fully compatible with the CoreFire™ Design Suite, an FPGA design application tool developed by Annapolis Micro Systems, Inc.

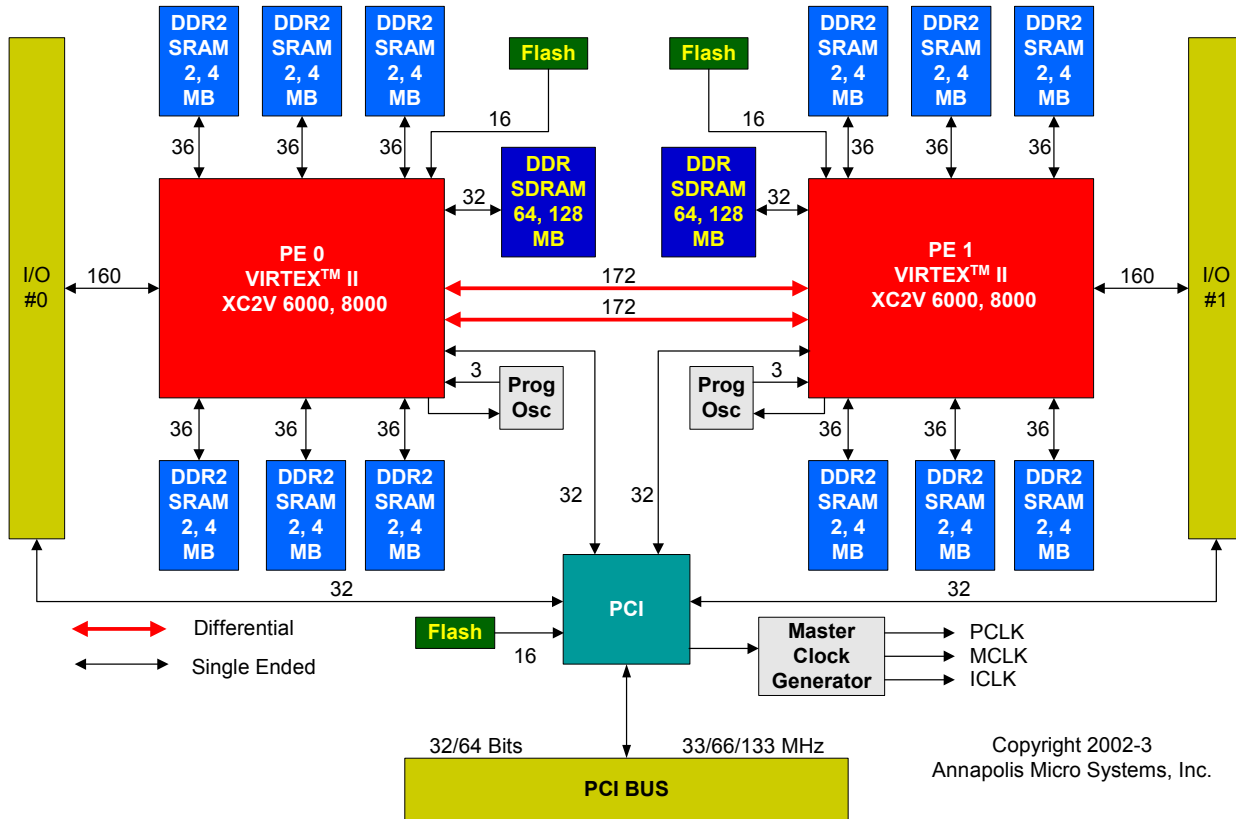
The CoreFire™ Design Suite is a Graphical User Interface (GUI) tool using Data Flow Methodology which combines Annapolis's extensive systems and application development experience with their large collection of tightly crafted high performance Intellectual Property (IP) Cores, the automatic generation of the logic necessary to control the interfaces between the modules, and Hardware in the Loop Debugging to provide an exceedingly convenient and fast methodology for developing FPGA application files. With CoreFire™ it is possible to completely implement an algorithm on our WILD™ Family of Field Programmable Gate Array (FPGA) boards without ever descending to the lower level hardware details, saving months of development time and money.

FPGA designers who have struggled for months to develop applications using VHDL are finding that CoreFire™ enables them to achieve better FPGA performance in a fraction of the time.

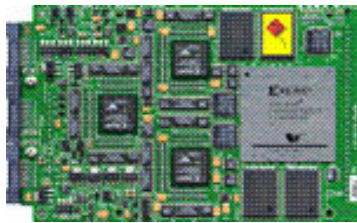
Combined with the Annapolis COTS WILDSTAR™ II FPGA boards with upwards of 40 million gates in a single VME slot using Xilinx Virtex™ II, the power of CoreFire™ can automatically and quickly provide correct, reconfigurable and reliable FPGA designs for these boards. Real world application experience has shown CoreFire™ to be the critical tool that enables the timely development of highly specialized FPGA designs, ensuring each program's success.

Gone are the days when an Application Developer had to learn hardware design methodologies, such as VHDL, Verilog, or low level schematic entry. CoreFire™'s "drag and drop" approach keeps the User operating on the conceptual, data flow level of his problem throughout the whole development process so he can concentrate on solving problems, not on designing hardware.

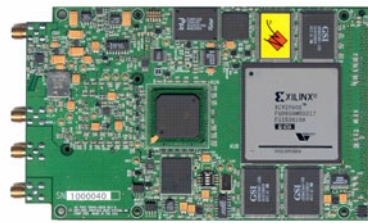
# WILDSTAR™ II PCI



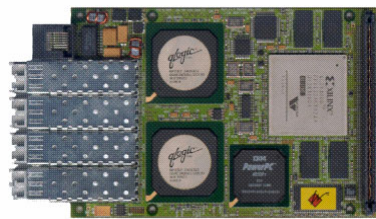
## Sample I/O Daughter Cards for WILDSTAR™ II for PCI



WILDSTAR™ Data Port - WSDP™



1.5 GHz A/D



Fibre Channel 2



105 MHz A/D

## Thermal and Power Management

To ensure safe and reliable processing, WILDSTAR™ II boards come equipped with a proactive thermal management system. Sensors across the board monitor power and temperature, with automatic shutdown capability to prevent excessive heat buildup. WILDSTAR™ II PCI boards include combination heat sink/fans on each FPGA Processing Element. Temperature thresholds for triggering the fan and for shutting down can be adjusted through the host software.

- Individual Power Supply and Management for each I/O Slot and each FPGA Processing Element
- SW or HW Controlled Fan/Heat Sink on Each FPGA Processing Element
- FPGA Processing Element, PCI Controller and Board Sensor Temperature Monitoring through API
- Board Level Current and Voltage Measurements
- Board Level Temperature Monitoring

### WILDSTAR™ II for PCI Family Board Part Numbers

Sample Part Number: WS2/XCV8000-5P/48/256

Board	WS2/ WS21/	WILDSTAR™ II Board with 2 PEs (Default) WILDSTAR™ II Board with 1 PE
Processing Element (PE)	XC2V6000-4,5,6 XC2V8000-4,5,6	Xilinx Virtex™ II XC2V6000 -4, -5, -6 Xilinx Virtex™ II XC2V8000 -4, -5, -6
Backplane	P/	PCI
Memory - DDR2 SRAM	0/, 12/, 24/, 48/	0, 12, 24, or 48 MBytes DDR2 SRAM
Memory - DDR SDRAM	0, 64, 128, 256	0, 64, 128, or 256 MBytes DDR SDRAM
PE Designator	-A, -B	For Single PE Boards - A = Populate PE for Standard I/O Card Connector B = Populate PE for I/O Card Adapter
Clock	-G	Allow Clock from External I/O Card to Drive a Global PE Clock

**Physical Dimensions:**

Length: 312.00 mm / 12.283 in.

Width: 106.68 mm / 4.200 in.

Thickness: 1.57 mm / .062 in.

Weight: 11.5 ounces

Fits in standard size PCI Slot with 0 or 1 I/O Card attached. If 2nd I/O Card is attached, requires a WS2 PCI 2nd I/O Adapter plugged into a second PCI slot for additional power.

Safety: All Printed Wiring Boards (PWB) are Manufactured with a Flammability Rating of 94V-0 by a UL Recognized Manufacturer.

**Temperature Range:**

Operating: 0 to 70 degrees C, With Forced Air Cooling

Combination Heatsink/Fan Standard for Each PE

Non-Operating: -40 Deg C to 85 Deg C

**Environmental Specifications:**

Power (3.3 Volts) and (5.0 Volts): TBD

Altitude, Humidity, Shock, Vibration, Mean Time Between Failures: TBD

Electromagnetic Compatibility (EMC): Intended for Use in Systems

Meeting the Following Regulations: USA: FCC Part 15, Subpart B, Class B and Canada: ICES-003, Class B

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