



StreamBlade



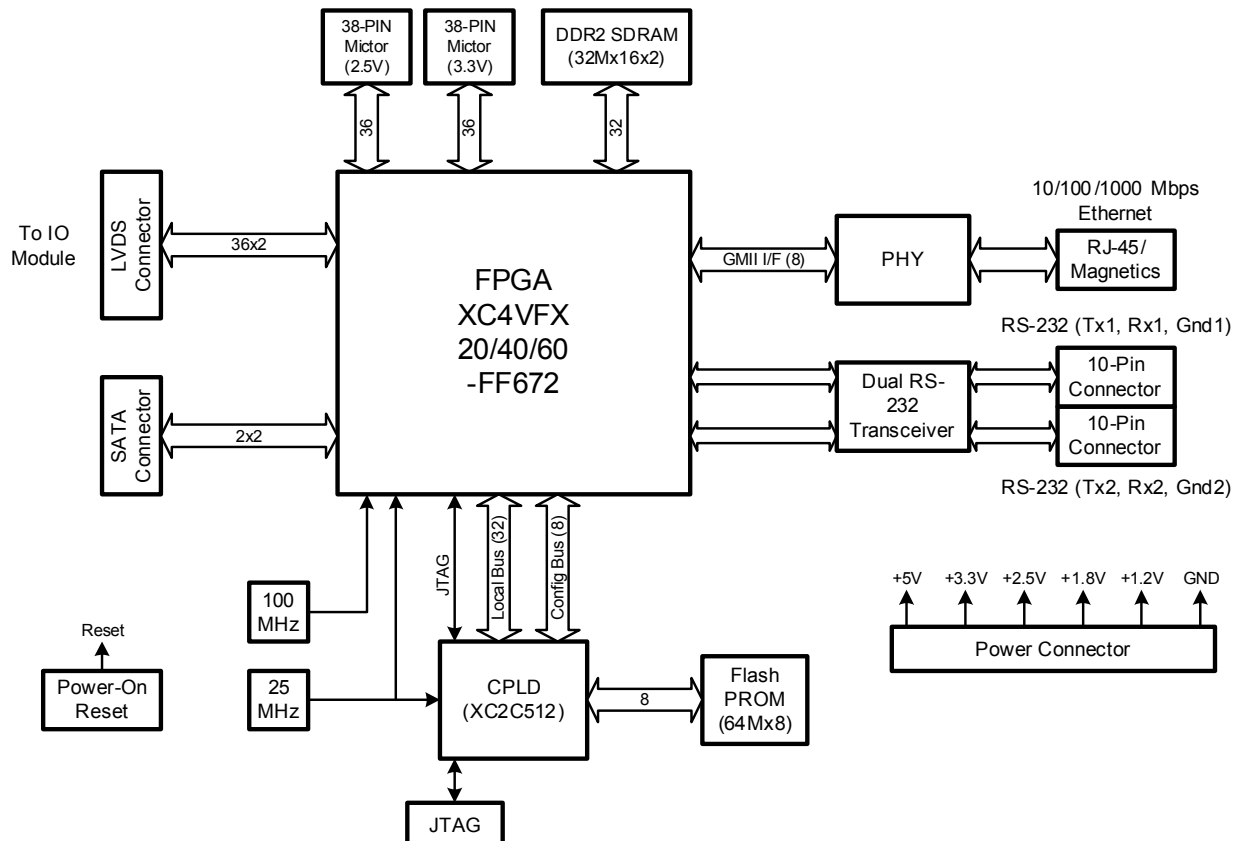
StreamBlade™ MiniFX DATA SHEET

FEATURE SUMMARY

- Xilinx XC4VFX60/40/20 FPGA
- Two PowerPC 405 Cores (450 MHz)
- 10/100/1000 Ethernet Port
- 32M x 32 bits DDR2 SDRAM
- I/O Connector with 36 LVDS capable differential pairs
- Two expansion connectors with 33 LVDS capable differential pairs
- 25MHz and 100MHz Oscillators
- Serial Data Connector (SATA) with 2 LVDS capable differential pairs
- 64MB Flash Memory
- Two Serial (RS-232)



MINIFX BLOCK DIAGRAM



The Embedded Systems Design, Inc. (ESD) StreamBlade™ MiniFX single board computer is a Xilinx Virtex-4 FX FPGA based design enabling the integration of high performance compute and signal processing functions on to a small form factor circuit card.



ORDERING INFORMATION

Call for pricing and availability: (410) 712-7290.



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MINIFX SPECIFICATIONS

Feature	Function	Detail
Form Factor	Card Dimension	3.5" x 3.0", 88.9 mm x 76.2

Feature	Function	Count	Detail
Interface	I/O	72/36	LVDS Capable
	Expansion	66/33	LVDS Capable
	Serial	4/2	LVDS Capable
Streaming Processors	FPGA	1	Xilinx XC4VFX60/40/20 FPGAs
	CPU	2	PowerPC 405 Cores (450 MHz Max)
Memory	DDR2 SDRAM	1	32M X 32 Bits (128M Bytes)
Non-Volatile Memory	Flash	1	64MB for FPGA Configuration and Power PC Code
I/O - Network	Ethernet	1	RJ-45 connectors with activity LEDs - Two per FPGA
			Tri-Mode Ethernet MAC Cores (IEEE Std 802.3-2002 compliant) - Two (usable) per FPGA
			Marvell 88E111 Gigabit Ethernet Transceiver
I/O - Additional	Serial	2	10-pin headers (RS-232 port)
	JTAG	1	4-pin header for FPGA/PPC Debug
Clocks	On-board Oscillators	2	25 MHz/100 MHz
Miscellaneous	LED	8	Four on FPGA/ Four on CPLD
	Switch	4	CPLD

Feature	Function	Value
Power	Quiescent	1.5 Watt
	Operational	4.0 Watt – 2 PPC on 1 FPGA max freq
Voltage	Board Supply	10-Pin Power connector with inputs for 5.0, 3.3, 2.5, 1.8, 1.2, and Ground
Environmental ¹	Temperature	0°C to 70°C - operational
		-40°C to +85°C - storage
	Air Flow	-
	Shock	up to 10g at 10ms - operational
	Vibration	0.25g (5-100Hz) - operational
		2.0g (5-100Hz) - storage
	Humidity	0-95% at 40°C non-condensing - operational
		0-95% at 40°C non-condensing - storage
	Altitude	0-15000 ft (0-4572 m)

¹ preliminary June 2007