

Sundance Multiprocessor Technology

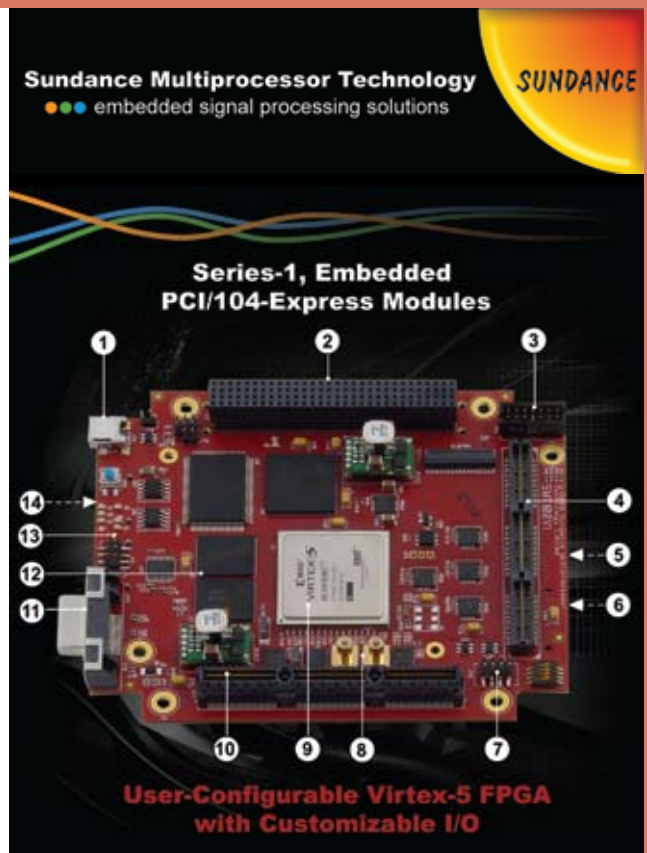
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SMT100: PCI/104-Express Virtex-5 FPGA Stackable Module

Sundance, the leading supplier and manufacturer of advanced Digital Signal Processing (DSP), multicore and reconfigurable COTS systems announced the Series-1: a complete range of PCI/104-Express small form factor, stackable FPGA-based modules. This new family of FPGA-centric products is reconfigurable, flexible and scalable to suit high performance computing and modular signal processing applications, enabling rapid prototyping and the deployment of embedded systems.

The SMT100 is a PCI/104-Express module designed for a variety of applications including real-time data acquisition, control and vision. It features medium and large Virtex-5 FPGA sizes in the FXT family type for embedded processing with a PowerPC 440 processor core. The FPGA is directly connected to high density DDR2 SDRAM memory for buffering and PCI Express for high bandwidth data transfers. These resources break the existing bandwidth limitation of previous bus technologies to perform high speed data streaming to host controllers.

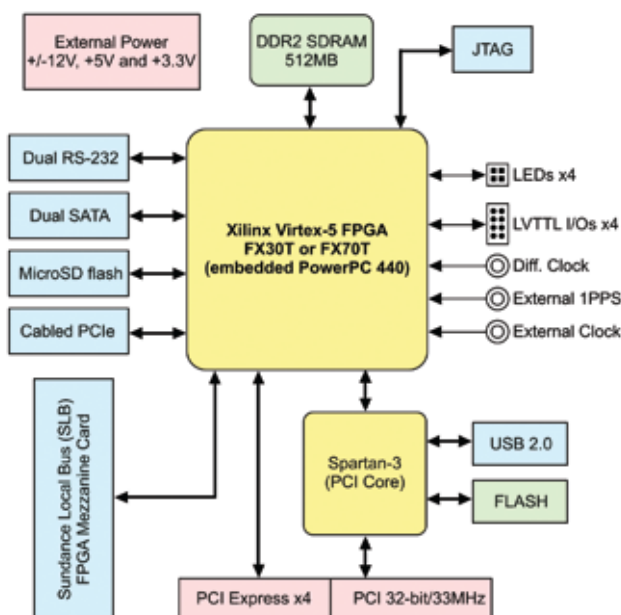
Using the Sundance Local Bus (SLB) mezzanine cards, the SMT100 processing platform can interface to a wide range of multichannel analogue and digital data converters (A/D and D/A), multichannel video I/O (PAL/NTSC, Camera Link, DVI, HDMI, GigE) and communication interfaces (Optical Fibre, RS-422, Ethernet).



FEATURES

1. USB 2.0 interface for flash programming
2. PCI 32-bit/33MHz
3. JTAG for debugging and FPGA programming
4. Sundance Local Bus (SLB) mezzanine card interface
5. MicroSD flash socket
6. External power connector (+3V, +5V, ±12V)
7. External differential clock input and LVTTTL I/O
8. External 1PPS synchronization and trigger signal inputs
9. Virtex-5 FX30T or FX70T FPGA device
10. PCI Express x4 lanes
11. Cabled PCI Express x1 lane
12. 512MB DDR2 SDRAM
13. Dual RS-232 ports
14. Dual SATA connectors

SMT100 PCI/104-Express Block Diagram



SLB	Data Acquisition and Waveform Generation			
	8 bits	12 bits	14 bits	16 bits
Mezzanine				
SMT391	Dual 1GSPS A/D			
SMT381		Dual 1GSPS D/A		
SMT941		Quad 250MSPS A/D		
SMT942			Quad 800MSPS D/A	
SMT943		Dual 250MSPS A/D	Dual 800MSPS D/A	
SMT390		Dual 210MSPS A/D		
SMT384		Quad 125MSPS A/D		
SMT980		Octal 125MSPS A/D		
SMT350		Dual 125MSPS A/D	Dual 500MSPS D/A	
SMT959		Quad 40MSPS A/D	Quad 125MSPS D/A	
SMT946		Quad 600kSPS A/D	Quad 2MSPS D/A	
SMT939	Video capture and display: DVI Transceiver			
SMT949	Digital camera framegrabber: Dual Camera Link			

For more information, contact: enquiries@sundance.com

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