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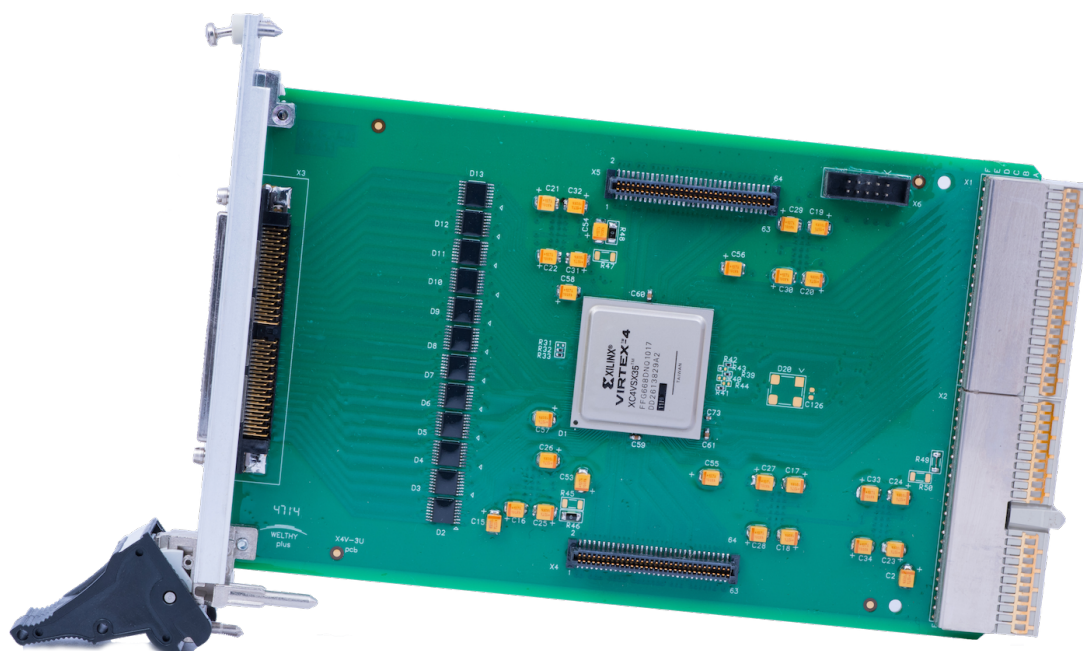
DIGITAL SIGNAL PROCESSING MODULE

V4X-3U-01

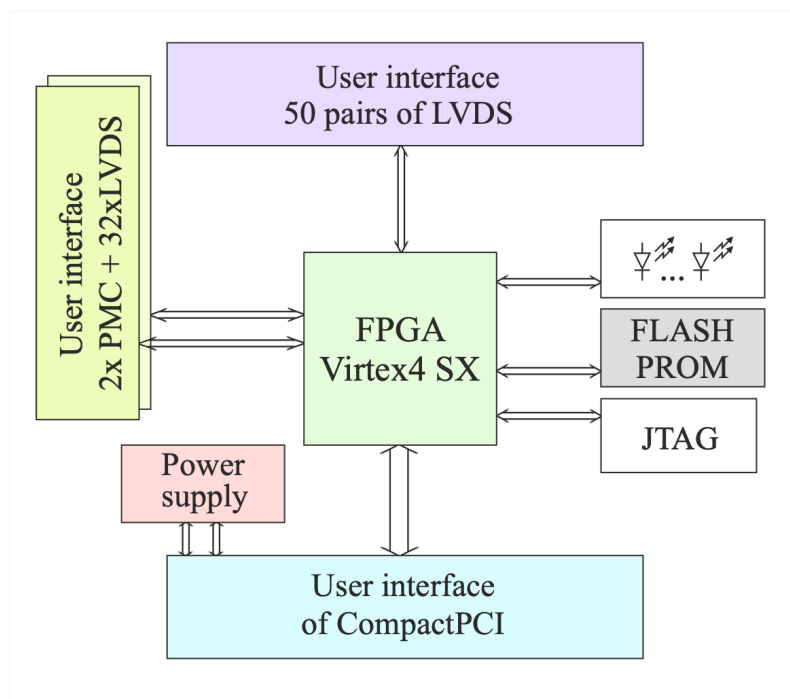
(brief technical description)

Year of manufacture: 2010

Part number: V4X-3U-01



powered by Xilinx®



Function

The V4X-3U-01 is a programmable logical computing device intended for digital signal processing.

The module was designed with a FPGA Xilinx Virtex4® of SX-series, that is used for real-time signal processing application.

Key features

Computational resource FPGA Xilinx Virtex4® SX35T is equal 18x18 bits multipliers and powered on XtremeDSP -192 slices with 240 Kb distributed RAM and 3,456Mb Block RAM.

The module has a FLASH memory (32Mb), that is used for automatic configuration FPGA resource by user program.

Design

The module is shaped according to 3U CompactPCI standard. The basic external I/O connectors are: a main CompactPCI connector and user connectors.

To ensure additional protection against environmental influences, all module surfaces are covered with a conformal waterproof coating.

I/O data interface

The V4X-3U-01 has high-density connector placed at the front panel of module. That is being used for data input/output (50 LVDS-pairs).

Developer tools

There is a debugging interface connector (JTAG) on the board, intended for user program running. That interface is fully matched to be used with configuration cables like Platform Cable USB (p/n: HW-USB-G, p/n: HW-USB-II-G) by Xilinx and Xilinx iMPACT utility. The basic software that is used for the module software developing including the flash images is Xilinx Foundation®.

MAIN SETTINGS	
Parameter Name	Value
Number of LVDS pairs (in the I/O data connector)	50
Number of configurable I/O lines (in the rear connector) LVDS/LVCMOS	40(80)
Electrical signal standard of data bus	LVDS25, LVCMOS25
Number of logical units	96x40 (=3 840)
Maximum volume of distributed RAM, KB	240
Maximum volume of Block RAM (550MHz), MB	3,456
Number of XtremeDSP slices (550MHz)	192
Equal number of accumulators (48 bits) in XtremeDSP slices	192
Number of Virtex4 SX35T chips	1
Flash memory size, Mb	32
Power consumption, not more, W	15
Size	160 x 100 mm
Outline dimension	4HP 3U PIGM 2.0.
Developer tools	Xilinx iMPACT®, Xilinx ISE Foundation®
Temperature range	-40°C ...+65°C
Additional environmental protection	Conformal waterproof coating