Programmable Industrial PCI Card for Specialized I/O Functions

The 5I22 from Mesa Electronics is a general purpose, programmable, industrial I/O card for the PCI bus. It uses a 1M or 1.5M gate Xilinx FPGA for all logic. The FPGA configuration is downloadable from the PCI bus side, allowing creation of almost any kind of specialized I/O function. Features include four 50-pin connectors with I/O module rack-compatible pin-outs and interleaved grounds, 24 I/O bits per connectors for a total of 96 bits, all being 5V tolerant and all can sink 12 mA. Pull-up resistors are provided for all pins so they can be connected directly to opto-isolators, contacts, etc., while the bus master and DMA capability allow fast PCI transfer rates. A 48 MHz crystal oscillator provides a reference clock which can be multiplied by FPGA DLLs for higher clock speeds. Several pre-made functions are provided, including a 16-axis host-based servo motor controller, a 32 channel quadrature counter, and versions of the SoftDMC motion controller including 4- and 8-axis versions for step motors, brush type servo motors and BLDC servo motors. There is also a simple 96-bit parallel I/O port and a 16-channel, 32-bit timer counter card capable of running at 100 MHz. VHDL source is provided for all functions. Six-layer circuit card construction is used to minimize radiated EMI and provide optimum ground and power integrity. Price of the 1M 5I22 is $219 and the 1.5M is $249, sold in hundreds.

Mesa Electronics
510.223.9272 , www.mesanet.com [1]

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