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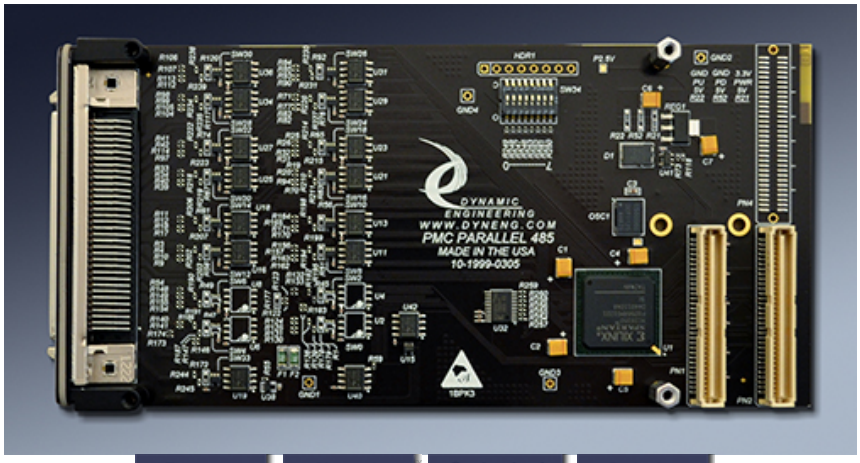
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PMC-Parallel-485



Features Manuals Customized Ordering

A simple "point and shoot" interface makes it easy to add up to 34 differential IO to your system with the PMC Parallel 485. The PMC compatible PMC-Parallel-485 design adds 32 [RS-485 /RS-422/LVDS] differential IO lines to one slot of your carrier board. 2 additional differential pairs are available for a clock & clock enable. The signals can be used to capture data with an external reference or programmed to be references for the rest of the system. Many standard features and ease of VHDL updating make PMC Parallel 485 a versatile design. PMC Parallel 485 is a companion design for the PMC BiSerial III. The Biserial has a larger more capable FPGA and is intended for larger designs. PMC Parallel 485 is a lower cost version with many of the same features scaled for smaller requirements. In addition the PMC XM DIFF has an even larger Virtex FPGA and is user programmable - for the really tough design requirements.

If you see a PMC BiSerial III or XM based design that has more "channels" than you need we can likely port a reduced version to PMC Parallel 485. If you need 7 units or more it will likely be cost effective to do this.

Each channel is software programmable to be an input or an output. The lower four bits are independent. The rest are programmed on a nibble basis.

Each channel is software programmable to be terminated or not. The lower four bits are independent. The rest of the bits are programmed on a nibble [4 bit group] basis.

Options to use a high density 68 pin SCSI III front panel connector and / or Pn4 to provide system IO. The connections to the front and rear IO are isolated to remove the unused trace length from your implementation. All IO is routed differentially with controlled impedance, and matching lengths to the front panel or Pn4.

The IO channels can be used as interrupt generators. Interrupts are programmable to be based on level or edge and active high or low. The registers are mapped as 32 bit words and support byte, word and 32 bit access. All registers are read-writeable.

An 8 bit user switch is provided to allow custom configurations to be easily and automatically configured with a common software driver. For example; the switch can be read through the status port and used to determine what the RX/TX configuration should be and any special characteristics for that implementation.

All of the data bits pass through the FPGA used to implement the PCI interface. Any or all bits can be used for

custom state machine and IO functions. Custom termination options are also available. Line selectable pull-up and pull-down resistor postions are available. Please contact Dynamic Engineering with your requirements.

PMC-Parallel-485 Features

- **Size** Single wide PMC.
- **Parallel Interface** 32 independent differential channels. Each channel can be an input or an output.
- **Clocks** 2 additional differential pairs for clock and clock enable. Software selectable direction control. Could be programmed for other purposes [FPGA].
- **State Machine** All bits are fed back through the FPGA to allow custom interfacing options.
  Contact the factory for implementation.
- **Interface** RS-485, LVDS and mixed transceiver options. Also compatible with RS-422 requirements.
- **Termination Resistor** Selectable switch plus resistor equivalent resistance. Selectable direction control.
- **User Bits** 8 switch positions are mapped through the Status Register to allow user configuration information to be read with software.
- **Software Interface** 32 bit registers.
  Read-back of channel control registers and input registers. Read-write of control register for card configuration.
- **Interrupts** All IO Channels can be programmed to cause interrupts. Each
  channel is programmable to be masked, active hi, active low, edge
  triggered. Interrupts are mapped to INTA on PCI bus.
- **Power Requirement** 300 mA at +5V typ.
- **External Clock** Input registers are programmable to capture data on the internal
  clock, user oscillator or external user supplied clock. Additionally an
  external clock enable input is provided to allow selective clocks to
  be gated at the register. SW can select internal or external
  source for clock and clock enable.
- **Internal Clock** The Input registers can be clocked with an internally generated
  clock derived from the PCI/2 reference. The rate is programmable
  with 8.25 MHz., 4.125 MHz, 2.063 Mhz., 1.031 Mhz., 515.6 Khz. selectable based on a 33 Mhz. PCI clock.

  User frequency oscillator position is also available. Oscillator clock rate can be used directly or divided down. All clock options programmable under software control.

Ordering Options

To include a drive or Engineering kit w/order please select from below:

Select card version

Quantity 1 Add to Cart View Cart

Custom Versions

-NG1.....PMC-Parallel-485NG1
Modified version with programmable counter timers, alternate interrupt implementation, clock generators and more. Please download the manual for details.

-NRC1.....PMC-Parallel-485-NRC1
Modified version with interrupt on change of state capability, upper bits muxed to allow input buffering or discrete outputs, and upper nibble predefined as output. Engineering kit available. Please download the manual for details.

Engineering Kits

PMC-Parallel-485-ENG-1.....Engineering Kit for PMC-Parallel-485 includes:
Board level Schematics [PDF], Reference Software [WIN NT, WinRT, Visual C ZIP file], 3' HDEcabl68 and HDEterm68.
PMC-Parallel-485-ENG-2 .....Engineering Kit includes:
PCI2PMC adapter card, board level Schematics [PDF], Reference Software [WIN NT, WinRT, Visual C ZIP file], 3' HDEcabl68 and HDEterm68-M.

Manuals

Download the PMC-Parallel-485 Manual updated 2/10/10 in Adobe Acrobat PDF format.
Download the PMC-Parallel-485 NG1 version Manual updated 10/19/16 in Adobe Acrobat PDF format.
Download the PMC-Parallel-485 NRC1 version Manual updated 4/30/03 in Adobe Acrobat PDF format.

Related Products

HDEcabl68 SCSI II/III Cable
HDEterm68 SCSI II/III to 68 pin terminal block

Dynamic Engineering's Hardware and Software design overview

Custom, IP, PMC, XMC, PCIe, PCI, cPCI, PC104p, PCIe104, VME, VPX Hardware, Software designed to your requirements

IndustryPack PMC cPCI PCI PCIe PC/104p VME VPX Custom

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