# FreeForm/PCI-104

FPGA for Reconfigurable Computing

### FreeForm/PCI-104

#### **Features**

- Based on Xilinx's Virtex-5 FPGA 3,000,000 logic gates
- PCI-104 form factor 32-Bit/33MHz
- Designed for embedded processing using MicroBlaze™
- 8MB Flash for embedded code storage
- 128MB DDR2-400 memory
- External 5V power connection for stand alone usage
- 2 x 10/100 Ethernet with modular jacks
- 2 x RS-485 serial interface
- 64 single ended or 32 LVDS general purpose I/O
- Industrial temperature range



FreeForm/PCI-104 is a flexible reconfigurable board that combines a user programmable FPGA with a 32-Bit, 33MHz PCI-104 interface. The advantages of PCI-104's high bandwidth along with the versatile FPGA architecture allows users to create a high speed data interface and control solution that is uniquely suited to each individual application.

Based on Xilinx's Virtex-5, Connect Tech's FreeForm/PCI-104 is highly versatile and provides a powerful platform for system development. Ideal for real-time data acquisition, high performance signal processing, avionics, autonomous vehicles and software defined radio, FreeForm/PCI-104 is perfect for embedded systems designs when used along with an embedded host processor.

Use Connect Tech's engineering services for FPGA design and software/driver development. FreeForm/PCI-104 includes a lifetime warranty and free technical support.

## **Specifications**

| Programmable<br>FPGA    | Xilinx multi-platform Virtex-5   |
|-------------------------|--|
| Input Clock             | 100 MHz  |
| Memory                  | 8MB Flash, 128MB DDR2-400  |
| Gates                   | 3,000,000 logic gates  |
| User I/O                | 64 single ended signals or 32 LVDS pairs   |
| Serial                  | 2 x RS-485   |
| Ethernet                | 2 x 10Base-T, 100Base-TX   |
| Bus                     | PCI-104 or stand alone   |
| Environmental           | Operating Temperature (standard): 0° C to 70° C (32° F to 158° F)<br>Industrial Temperature: -40° C to 85° C (-40° F to 185° F)<br>Humidity: 95% non-condensing    |
| Power<br>Requirements   | +3.3 V DC and +5 V DC (+/- 5%)<br>Note - power requirements may vary by application  |
| Dimensions              | PC/104- <i>Plus</i> 2.2 compliant<br>PCI-104 1.0 compliant   |
| Connectors              | Two RJ-45 modular jacks (Ethernet)<br>Two 2x5 0.100" headers (serial)<br>One 2x40 0.050 x 0.100" header (general I/O)<br>One 1x6 0.100" header (flash programming) |
| Warranty and<br>Support | Lifetime warranty and free technical support   |



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