

# FreeForm/PCI-104

FPGA for Reconfigurable Computing


## FreeForm/PCI-104

### Features

- Based on the Virtex-5 FPGA - up to 5,000,000 gates
- PCI-104 form factor - 32-Bit/33MHz
- Proven platform for rapid prototyping
- 8MB Flash for embedded code storage
- 128MB DDR2-400 memory
- 2 x 10/100 Ethernet with modular jacks
- 2 x RS-485 serial interface
- GPIO - 64 single ended or 32 LVDS pairs
- 4 x Rocket I/O channels
- Industrial temperature range
- MicroBlaze and PowerPC 440 embedded processor options
- Access to reference designs and BSPs



### Specifications

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

FreeForm/PCI-104 is a flexible embedded computing module 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 the Xilinx Virtex-5 FPGA, 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 system 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 lifetime warranty and free technical support.



**Connect Tech Inc.**  
Industrial Strength Communications

42 Arrow Road  
Guelph, ON, Canada  
N1K 1S6

[www.connecttech.com](http://www.connecttech.com)

Phone: 1-519-836-1291  
Toll free (in North America): 1-800-426-8979  
Fax: 1-519-836-4878  
Email: [sales@connecttech.com](mailto:sales@connecttech.com)