

## FreeForm/PCI-104

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.

### Specifications

<b>Programmable FPGA</b>	Xilinx multi-platform Virtex-5 (LXT or FXT)
<b>Input Clock</b>	100 MHz
<b>Memory</b>	8MB Flash, 128MB DDR2-400
<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>Temperature</b>	Industrial Temperature: -40° C to 85° C (-40° F to 185° F) Humidity: 95% non-condensing
<b>Software Support</b>	<b>Embedded Software Support:</b> QNX <b>Host System Software Support:</b> QNX, Windows, Linux
<b>Power Requirements</b>	5 V DC (+/- 5%) <i>Note - power requirements may vary by application</i>
<b>Dimensions</b>	PCI-104 1.0 compliant <b>Length:</b> 3.775" x <b>Width:</b> 3.575" x <b>Height:</b> 0.535"
<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

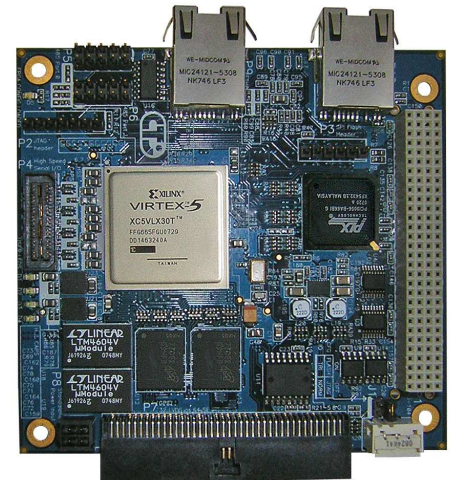
## RoHS

Specifications subject to change without notice.  
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Part Number	FPGA	GPIO
<b>FCG001</b>	LX30T	LVDS, 2.5V CMOS Single Ended
<b>FCG002</b>	LX30T	3.3V CMOS Single Ended
<b>FCG003</b>	FX30T (PowerPC)	LVDS, 2.5V CMOS Single Ended
<b>FCG004</b>	FX30T (PowerPC)	3.3V CMOS Single Ended
<b>FCG005</b>	LX50T	LVDS, 2.5V CMOS Single Ended
<b>FCG006</b>	LX50T	3.3V CMOS Single Ended



Product Name: FreeForm/PCI-104



## FEATURES

- ✓ Based on the Virtex-5 FPGA  
Options: LX30T, LX50T & FX30T
- ✓ PCI-104 form factor, 32-Bit/33MHz
- ✓ 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/32 LVDS pairs
- ✓ 4 x Rocket I/O channels
- ✓ MicroBlaze and PowerPC 440 embedded processor options
- ✓ Access to reference designs and BSPs

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