

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

Programmable FPGA	Xilinx multi-platform Virtex-5 (LXT or FXT)
Input Clock	100 MHz
Memory	8MB Flash, 128MB DDR2-400
User I/O	64 single ended signals or 32 LVDS pairs
Serial	2 x RS-485
Ethernet	2 x 10Base-T, 100Base-TX
Form Factor	PCI-104
Temperature	Industrial Temperature: -40° C to 85° C (-40° F to 185° F) Humidity: 95% non-condensing
Software Support	Embedded Software Support: QNX Host System Software Support: QNX, Windows, Linux
Power Requirements	5 V DC (+/- 5%) <i>Note - power requirements may vary by application</i>
Dimensions	PCI-104 1.0 compliant Length: 3.775" x Width: 3.575" x Height: 0.535"
Connectors	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)
Warranty and Support	Lifetime warranty and free technical support

RoHS

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