

PMC-FPGA-3C120

High Density FPGA PMC with Abundant I/O

The PMC-FPGA-3C120 is a general purpose PMC specifically designed to accommodate high density I/O interfaces. It is capable of supporting Embedded Linux, MicroC/OS-II or other embedded operating systems. It can be used in either conduction or convection cooled environments. In a convection cooled environment, it is possible to add a custom interface adapter to the front connector on the board to support a variety of I/O signaling standards.



Features

- Altera EP3C120F780C7ES FPGA
- 32 Mbytes DDR2 266 MHz SDRAM
- 64 Mbit Load Device
- 10/100/1000 Mbps Ethernet Interface
- RS-422 Interface
- RS-232 Interface
- 44 GPIO connected to PN4
- 72 GPIO on auxiliary connector
- PCI 33/66 MHz, 32/64 Data
- Compact Flash Socket
- 4 User Programmable LEDs
- JTAG programming interface
- -40 to +80°C Operation

Benefits

Utilizing the highest density, highest speed Altera Cyclone 3 FPGA, the board has ample space for very large designs that may require custom interface protocols or standard I/O interfaces. The choice of part allows a reasonable price point for exceptional density and performance. In addition, all resources are available to run a real time operating system, buffer data and manage I/O as required.

Beyond Electronics Corporation

3209 Gresham Lake Road, Suite 113
Raleigh, NC 27615
Phone: 919-231-8000
Fax: 919-231-8001

PMC-FPGA-3C120

EP3C120F780C7ES FPGA

- Low Power 65-nm process (less than 2 watts TPD)
- Bus standards include: LVTTTL, LVCMOS, SSTL, HSTL, PCI, PCI-X, etc.
- Logic Elements: 119,088
- Memory (Kbits): 3,888
- Multipliers: 288
- Global Clock Networks: 20

SDRAM

- DDR2, 266 MHz
- Organized as 2 components in tandem with a 16 bit data interface

FPGA LOAD DEVICE

- Altera EPCS64 or equivalent device
- 64 MBit density
- Fast serial load capable
- Adequate space to store program for FPGA processor and user data

ETHERNET INTERFACE

- 10/100/1000 Mbps capable
- National DP83865 Phy
- GMII Connection to FPGA

SERIAL INTERFACES

- One RS-422 Interface with footprints for termination
- One RS-232 Interface
- ISL81334 Transceiver

GENERAL PURPOSE I/O

- All GPIO connected directly to the FPGA and capable of the voltage and current drive of the respective bank
- Auxiliary connector capable of supporting a custom mezzanine board for signal level translation

PCI INTERFACE

- Connections on board to support either 32 or 64 bit interface and 33 or 66 MHz operation.

COMPACT FLASH INTERFACE

- Single type one compact flash socket.
- Quick switches on board to allow 5V compact flash operation

LEDs

- User programmable LEDs are directly connected to dedicated FPGA I/O pins

JTAG INTERFACE

- The JTAG interface is user accessible and is dedicated to programming and debugging the FPGA.

FPGA SUPPORT

- FPGA design examples in the form of Altera project files and NIOS software examples are provided with the board to enable rapid development and prototyping.
- Pin and constraints files are included in the projects.
- Minimal Linux driver example source included.

ORDERING INFORMATION

PMC-FPGA-3C120-A - Air Cooled
PMC-FPGA-3C120-C - Conduction Cooled

ALSO AVAILABLE UPON REQUEST:

Custom I/O interface adapter modules
Custom FPGA development
Custom driver development