



# Chameleon Miniature Power PC Single Board Computer With Linux

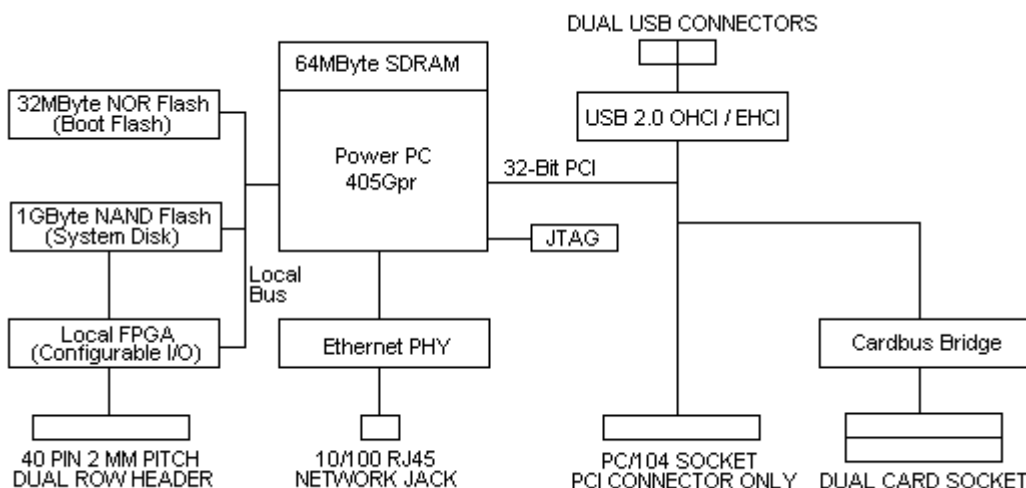
Data Design Corporation

Gaithersburg, MD

The Chameleon is a Power PC computing platform with an advanced peripheral feature set in a 4.5x6.5 inch form factor. This miniature computer includes an AMCC Power PC 405 GPr processor with substantial embedded functionality including a PCI bridge and an array of peripherals. The board includes 32 megabytes of flash memory, a 1 Gbyte NAND flash for file system use, 64 megabytes of DRAM, Ethernet port, real time clock with battery backup, PCI-104 expansion connector, USB 2.0 port, and dual cardbus socket. The flash memory and flash disk includes a Linux kernel and flash file system, making the Chameleon a complete turn key single board computer. An RS-232 serial port is provided as a user terminal interface. The operating system is available upon applying power, allowing immediate application development.

The Chameleon is intended to be a core component in an embedded computing design. The PCI-104 connector provides room for system expansion with a virtually limitless number of peripheral devices available. Low level connections such as JTAG and FPGA I/O are provided for advanced development needs. The board is powered by a single +12V power supply with a wide tolerance.

## Block Diagram





## SPECIFICATIONS SUMMARY

### General

#### Power Requirements

+12V @ 1A Plus Peripheral Usage  
Tolerant To +10V to +15V Range

#### Ambient Temperature Range

0 To 70 Degrees C

#### Package Size

4.5 x 6.5 inches circuit board  
1 inch overall height

### Features

#### Processor

AMCC Power PC 405 GPr (400 MHz)

#### Memory

32 Megabyte NOR Flash  
64 Megabyte DRAM  
1 Gigabyte NAND Flash Disk

#### Peripheral Set

PCI (25 MHz)  
Ethernet  
USB 2.0  
Cardbus (32-bit devices only)  
Real Time Clock  
I<sup>2</sup>C Port  
RS-232 Level Console Port  
TTL Level Serial Port  
FPGA I/O Points  
JTAG Connection Point

#### Software Features

Linux 2.4 Kernel Installed

### Applications

Embedded Control  
Instrumentation  
Industrial Monitoring  
Kiosk User Interface  
Vending Machine