

"PPCHAMELEON"[®]

PowerPC 405EP CPU SODIMM Module



- CPU module based on PowerPC 405EP (115 to 290 Drystone MIPS V2.1)
- PCI host bus + Expansion Bus fully available
- NAND Flash on-board (option) + JFFS2 filing system
- Ready for Linux 2.4.20 + native component drivers
- Evaluation Board available with exhaustive development kit
- DDR 200 SODIMM compact form factor, inexpensive connector
- Development Kit available in GNU environment
- ITE & ISM approvals
- Ready For IBM Technology

PPCHAMELEON is a ready-to-use CPU module based on IBM PowerPC 405EP characterized by its reliability and compactness as well as easiness of configuration. PCI bus and Expansion Bus are fully available.

PPCHAMELEON is available in three models:

- PPC-BA (133MHz, no NAND)
- PPC-ME (266MHz, 32MB NAND)
- PPC-HI (333MHz, 128MB NAND)

The true force of the module is the quality of the software (PELK or PowerPC Embedded Linux Kit) that is provided with the **PPCHAMELEON** Evaluation Board. This software not only allows a straightforward use of GNU toolchain, but is also continuously up to date and maintained with new peripherals, applications and drivers. **PPCHAMELEON** Evaluation Board is a flexible and complete system where users can test their own applications or add their own expansion boards:



- ATX PSU
- SODIMM connector for PPChameleon Module
- NAND + CPLD bus adaptation
- SRAM for bootcode debugging
- PCI clocking circuitry
- JTAG and TRACE interfaces
- Bootstrapping circuitry (FLASH or SRAM)
- 3 PCI slots
- Expansion Bus connector
- RTC with back-up battery
- 2nd PHY 10/100 + 2 RJ45 including magnetics
- RS485 + full RS232

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CPU

IBM Power PC® 405EP @133, 266 or 333 MHz (115, 230, 290 Drystone MIPS 2.1)

CPU supervision

PSU supervisors Core and I/O power supply separate supervision

Memory

SRAM 4KBytes internal
Cache 16K cache for instructions +16K cache for data
SDRAM 32MBytes
Flash NOR 4 Mbytes
Flash NAND 0/32/128 Mbytes
EEPROM 2048 bit

Interfaces (to the connector)

Ethernet PHY 1 Ready for magnetics
Ethernet MAC 1 MII 802.3u interface
UART 1 (8 Wire) + 1 (Rx/Tx)
I²C Master/slave/multimaster 400kHz
Timers 5
External Bus 8/16-bit byte - 29 Address Bits -5 direct Chip Select
Bus Speed < 66MHz
PCI host (version 2.2), arbiter supporting 3 devices
I/O Controller yes, number tbd
Debug JTAG IEEE 1149.1 Test Access Port + IBM TRACE
Interrupts 7 external and 19 internal interrupts

Mechanical

Connectors 200 pin DDR SO-DIMM (JEDEC MO-224) *double height* format
Physical 67,50 x 50,80 x 1,00 mm³ (2,7"x 2,0"), fixing hole
Compatibility AMP pn 1376408, Yamaichi pn IC-657-1
PCB 8 layers
Material FR4
Technology double-sided SMT
Contacts gold-plated
Temperature 0÷70 °C (-40÷85 °C optional) operational temperature

PSU

3.3V and 1.8V Through connector
Consumption Less than 2,0W total power consumption

Software

RTOS eCos
Multitasking OS Linux 2.4.20
RT module RTAI

Agency approvals

CE Mark ITE & ISM
EN 55022, EN 55011, EN 55024

Informations and sales

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