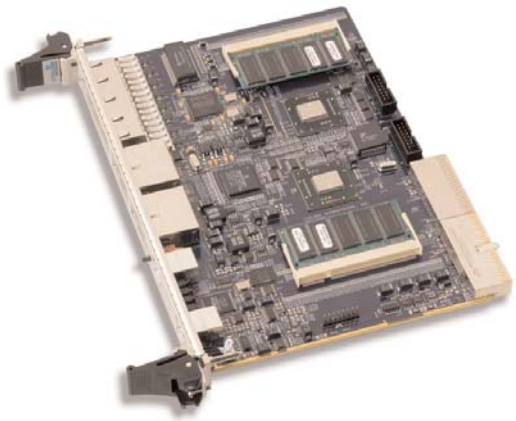
CYCLONE Microsystems
Intelligent I/O Controllers

# CPCI-825 Dual Processor Communication Blade

- PowerPC 8540 Processor
- Power QUICC III 8560 Processor
- Hot Swap Capable
- Front Panel Reset Switch



RoHS Compliant

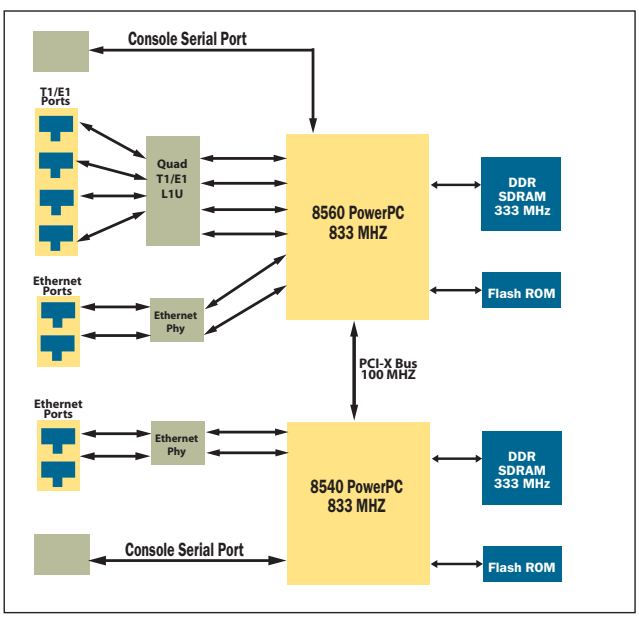
## Features

- PowerPC 8540 Processor
  - 833 MHz Core Processor
  - 256 Kbytes L2 Cache Memory
  - DDR SDRAM at 333 MHz
    - So DIMM Module
    - Up to 1Gbyte with ECC
  - 8 Mbytes Flash ROM
  - Two Gigabit Ethernet Ports
  - PCI-X Interface at 100 MHz
  - Consol Serial Port
  - Watchdog Timer
  - Fan and Power Supply Monitors
  - Temperature Sensor
- Power QUICC III 8560 Processor
  - 833 MHz Core Processor
  - 333 MHz Communication Processor
  - 256 Kbytes L2 Cache Memory
  - DDR SDRAM at 333 MHz
    - ECC protection
    - Up to 1Gbyte
    - SoDIMM Module
  - Four T1/E1 Ports
    - Programmable as TDM or ATM ports
  - Two Gigabit Ethernet Ports
  - PCI-X interface at 100 MHz
  - 8 Mbytes Flash ROM
  - Tempature Sensor
- Hot Swap Capable
- Front Panel Reset Switch
- Breeze Development Environment
- VxWorks BSP
- Linux LSP
- UL/CUL/CE Mark
- NEBS Compliance
- RoHS Compliance

The CPCI-825 is a CompactPCI form factor, blade-style communications processor designed for demanding telecommunications and protocol processing applications. The Board boasts a two processor solution, PowerPC 8540 Processor and a Power QUICC III Communications. The Blade Provides four Gigabit Ethernet ports (two to each processor) and four T1/E1 interfaces. The T1/E1 interfaces can be run in TDM (Time Division Multiplex) mode or ATM mode.

The CPCI-825 is supported by Cyclone's Breeze Development Environment, an LSP for Linux 2.6, and a BSP for Wind River System's VxWorks/Tornado.

The CPCI-825 has been certified to the demanding NEBs Level 3 requirements when installed in Cyclone Microsystem's the three-slot, dual AC powered Compact PCI 600-2014 chassis or the three-slot, dual DC powered, Compact PCI 600-2015 chassis.

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CPCI-825 Data Sheet
June 2007

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# CPCI-825 Dual Processor Communication Blade

### PowerPC 8540 Processor

The boards architecture is built around an Freescale embedded processor at 833 MHz which features an integrated PowerPC superscalar core with a 256K L2 cache, a fast memory controller, a PCI-X bridge, and a DMA controller.

### Power QUICC Processor

The 8560 Power QUICC Processor provides a Power PC core at 833 MHz plus a communications core at 333 MHz to control the four T1/E1 ports. The ports can operate in a TDM (Time Division Multiplex) mode or an ATM mode.

### SDRAM

Two SoDIMM modules, one for each processor. Each module support up to 1 Gigabyte of 333 MHz DDR SDRAM with ECC.

### FLASH ROM

Eight Mbytes of in-circuit sector-programmable Flash ROM provides non-volatile storage. One 128 Kbyte sector of the Flash ROM is reserved for the storage of non-volatile boot and system parameters. System calls for storing parameters in this memory are included in the Breeze Development Environment. Each processor has its own boot Flash ROM.

### Ethernet Ports

Four 10/100/1000BaseTx Ethernet ports on RJ45 connectors.

### Serial Console Ports

An asynchronous serial RS-232 interface is provided for a console terminal or workstation connection.

### Environmental Monitoring

Two programmable temperature sensors are provided for system monitoring. When the CPCI-825 is install in the host slot of the Cyclone CPCI chassis, fan detection and power supply status signals are available for system status alarming.

### Blade Style Interface

The CPCI-825 uses the Compact PCI mechanical standard and receives power, fan detect, power supply status and geographic addressing from Compact PCI J1 and J2 connectors. The board's local PCI bus is not directed the external CPCI connectors.

### Hot Swap

The CPCI-825 is Basic Hot Swap compliant to PICMG 2.1 standards.

### JTAG Emulator Support

A JTAG emulator interface is provided to support software development.

### Breeze Development Environment

Flash-resident ROM monitor/firmware package support board-level initialization and application software development.

## Environmental

**Physical Dimensions**

| | |
|---|---|
| Height | 9.187” (233.35mm) |
| Double Eurocard | (6U) |
| Depth | 6.299” (160mm) |
| Width | 0.8” (20.32mm) |

| | |
|---|---|
| **Operating Temperatures** | 0 to 55 Degrees Celsius |
| **Relative Humidity** | 0 – 95% |
| **Storage Temperatures** | –55 to 125 Degree Celsius |

**Power Requirements**

| | |
|---|---|
| +3.3V | 16.5 Watts Typical, |
| | 23.1 Watt Maximum |
| +5V | 20.0.Watts Typical, |
| | 27.5 Watts Maximum |

**Regulatory/Safety Compliance**

GR-1089-Core, EN55022,
Class A, ICES-003
EN/UL/CUL/60950-1
CE Mark
Conducted Emissions
Radiated Emissions
I/O Line Conducted Emissions
FCC Part 15, Subpart B Class
RoHS Compliance

## Ordering Information

**CM825-aaa-bb**

| **aaa-Memory Options** | **bb-Firmware** |
|---|---|
| 256 - 256 Mbyte | B - Breeze (default) |
| 512 - 512 Mbyte | T3 - Telcordia |
| 1G - 1 Gigabyte | |




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