CYCLONE Microsystems™
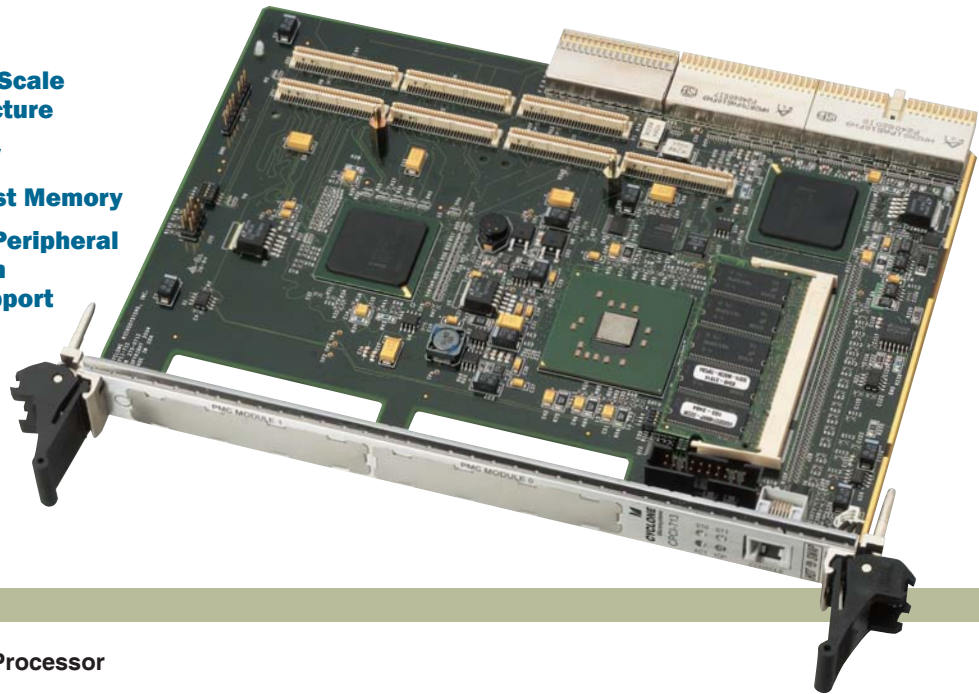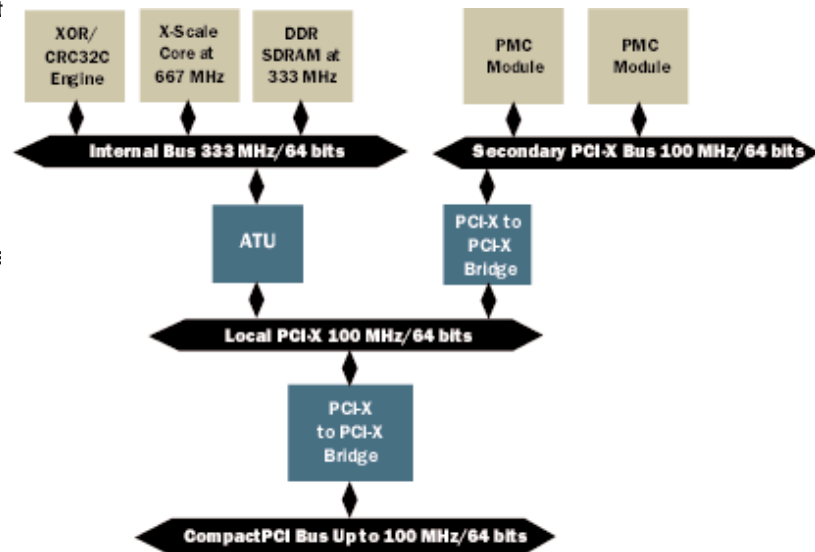## Intelligent I/O Controllers

CPCI-713 Compact PCI Peripheral I/O Controller

♦ **Intel 80331 XScale Microarchitecture**

♦ **I/O Flexibility**

♦ **Large and Fast Memory**

♦ **CompactPCI Peripheral Interface with Hot Swap Support**

Features

♦ **80331 XScale Processor**

♦ **Up to 1 Gbyte DDR SDRAM at 333 MHz**

♦ **64 bit Compact PCI Interface**

♦ **Perpheral Interface**

♦ **Hot Swap Support**

♦ **64 bit Local PCI-X Bus**

♦ **Two PMC-X Module Locations**

♦ **64 bit Interface**

♦ **100 Mhz PCI-X Bus**

♦ **Eight Mbytes Flash ROM**

♦ **Console Serial Port**

♦ **Breeze Development Environment**

♦ **Board Support Packages for:**
  - VxWorks
  - Linux 2.6

Block diagram:
- XOR/CRC32C Engine
- X-Scale Core at 667 MHz
- DDR SDRAM at 333 MHz
- PMC Module
- PMC Module
- Internal Bus 333 MHz/64 bits
- Secondary PCI-X Bus 100 MHz/64 bits
- ATU
- PCI-X to PCI-X Bridge
- Local PCI-X 100 MHz/64 bits
- PCI-X to PCI-X Bridge
- CompactPCI Bus Up to 100 MHz/64 bits

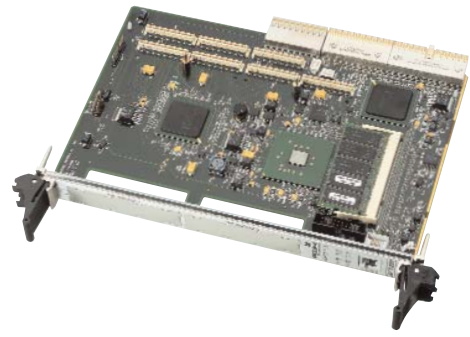**CPCI-713 Data Sheet July 2005**

Product Description

The CPCI-713 is a high-performance CompactPCI Intelligent I/O Controller that expands system performance in advanced embedded systems such as telecom servers, data acquisition, video networking and other high-speed LAN/WAN applications.

The intelligent I/O controller features Intel's XScale 80331, a fast data movement and I/O processor, coupled together with a triple bus architecture for simultaneous data movement. High-speed 333 MHz DDR SDRAM and 64 bit/100 MHz PCI-X busses allow rapid throughput while dual PMC module positions permit I/O flexibility. The CPCI-713 supports PMC modules for Dual GbE, Ultra320 SCSI, and ATM. Cyclone also develops customer-specific PMC modules.

![Cyclone Microsystems logo] **CYCLONE** *Microsystems*™
Intelligent I/O Controllers

CPCI-713 Compact PCI Peripheral I/O Controller

Technical Specifications

Processor

Microprocessor	Intel XScale 80331 at 667 MHz
On-chip Cache (I/D)	32 Kbyte, 32 way, set associative

Memory

Memory Capacity	256, 512 Mbytes, or 1 Gbyte
Architecture	Synchronous Double Data Rate (DDR SDRAM) with optional ECC
Performance	333 MHz
Flash	8 Mbytes

PCI Interface

Primary PCI Interface	PCI-X Rev 1.0 (64 bit/133 MHz) +3V Signaling

Ethernet Interface

Controller	82544GC Gigabit Ethernet Controller with Integrated PHY
Interface Speed	10/100/1000Base-T Auto Negotiable
Connectors	RJ-45, CAT5 UTP, on front panel
LEDs	Activity and Link status on front panel

PCI Mezzanine Card Slot IEEE P1386.1

Address/Data	A64/D64 PMC P11, 12, 13
PCI Bus Clock	33/66 or 100 MHz
Signaling	+3.3V
Power	+3.3V, +5V, +12V, 7.5 watts maximum
Module Types	Two single-wide

Miscellaneous

	Two Temperature Sensors

Asynchronous Serial Port

Controller	16C550 UART
Speed	300 to 115,200 bps
Connector	RJ-11, on front panel

Environmental

Physical Dimensions	6U Eurocard
Height	9.187" (233.35mm)
Depth	6.299" (160mm)
Operating Temperatures	0 to 55 Degrees Celsius
Relative Humidity	0 – 95%

Power Requirements

+3.3V	3.08 Watts Typical, 4.4 Watt Max
+5V	0.08 Watts Typical, 0.11 Watts Max
+12V	0.01 Watts Typical, 0.01 Watt Max
n12V	0.01 Watts Typical, 0.01 Watts Max
Storage Temperatures	–55 to 125 Degree Celsius

Ordering Information

CM-713- [AA][BB]-[CCC]-[D]

AA - PMC Module 0

BB - PMC Module 1

CCC - 256 - 256 Mbytes DDR SDRAM

   - 512 - 512 Mbytes DDR SDRAM

   - 1G - 1Gigabyte DDR SDRAM

D - B - Breeze Development Environment

   V - VxWorks

   L - Linux 2.6

800-0713 - CPCI-713 User's Manual

CYCLONE *Microsystems*™
Call (203) 786-5536 e-mail to information@cyclone.com