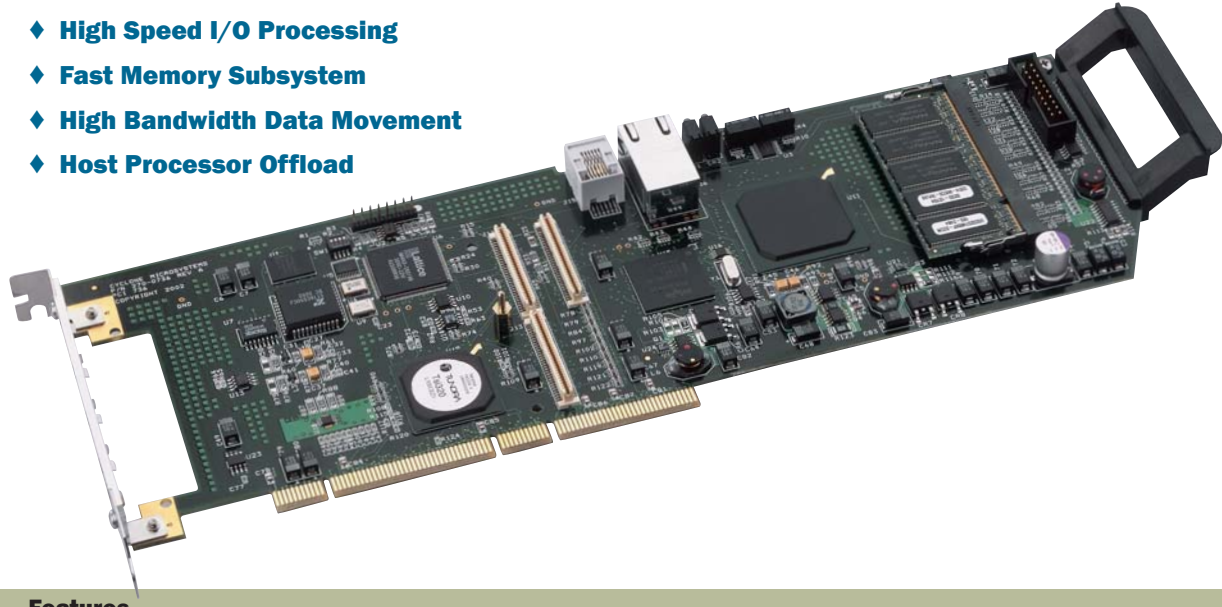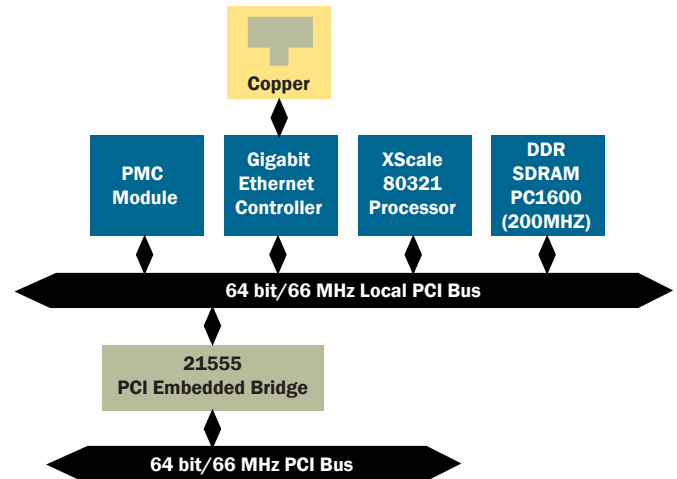# PCI-736 PCI Intelligent I/O Engine

◆ **High Speed I/O Processing**

◆ **Fast Memory Subsystem**

◆ **High Bandwidth Data Movement**

◆ **Host Processor Offload**

Features

◆ **Intel 80321 XScale Processor at 600 MHz**

◆ **Up to 512 Mbytes DDR SDRAM at 200 MHz (PCI600)**

◆ **Gigabit Ethernet Interface**

◆ **PMC Interface 64bit/66 MHz**

◆ **PCI Interface 64bit/66 MHz**

◆ **8 Mbytes Flash ROM**

◆ **Console Serial Port**

◆ **Temperature Sensors**

◆ **Breeze Development Environment**

◆ **Board Support Packages**
   - **TimeSys Linux**
   - **VxWorks 5.4/Tornado**

Product Description

The PCI-736 is an PCI Intelligent Real Time I/O engine that features the 80321 XScale processor, up to 512 Mbytes of DDR SDRAM, a Gigabit Ethernet Port, and a PMC module location for standard or custom I/O. PMC modules can support functions like Dual Gigabit Ethernet, Ultra320 SCSI, ATM OC-12, and custom modules for support of unique high speed I/O.

The PCI-736 successfully offloads the host processor of highspeed I/O protocol processing and interrupt handling. Diverse real time systems like medical imaging, seismic logging, high speed data acquisition all benefit from off-loading the host processor with an intelligent I/O engine.

The PCI-736 is supported by Cyclone's Breeze Development Environment, TimeSys Linux with Real Time CPU Reservations and VxWorks 5.4/Tornado 2.2. The three offerings cover a variety of real time project requirements from simple embedded code to sophisticated real time systems. Host drivers for Windows XP are also available.

PCI-736 PCI Intelligent I/O Engine
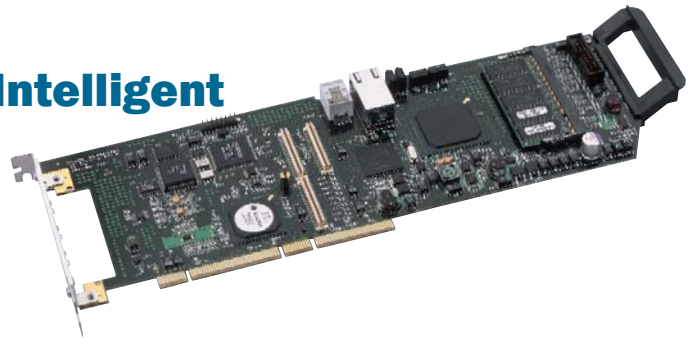
Technical Specifications

Processor

Microprocessor	Intel XScale 80321 at 600 MHz
On-chip Cache (I/D)	32 Kbyte, 32 way, set associative

Memory

Memory Capacity	256, 512 Mbytes
Architecture	Synchronous Double Data Rate CDDR SDRAM) with optional ECC
Performance	200 MHz
Flash	8 Mbytes

PCI Interface

Primary PCI Interface	PCI 2.2 (64 bit/66 MHz) Universal Signaling

Ethernet Interface

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

PCI Mezzanine Card Slot IEEE P1386.1

Address/Data	A64/D64 PMC P11, 12, 13
PCI Bus Clock	33/66 MHz
Signaling	+3.3V
Power	+3.3V, +5V, +12V, 7.5 watts maximum
Module Types	One single-wide, front panel I/O

Miscellaneous

Two Temperature Sensors

Asynchronous Serial Port

Controller	16C550 UART
Speed	300 to 115,200 bps
Connector	RJ-11, on top edge of board

Environmental

Physical Dimensions	PCI Long Card 12.35" wide and 3.95" high (313.78mm x100.33mm)
Operating Temperatures	0 to 55 Degrees Celsius
Relative Humidity	0 – 95%

Power Requirements

+3.3V	2.36 Watts Typical, 3.3 Watts Maximum
Storage Temperatures	– 40 to 35 Degree Celsius

Ordering Information

CM-736-*AAA-BB-C*

A AA–Memory Capacity

(256) 256 Mbytes
(512) 512 Mbytes
(1G) 1 Gbtye

BB – Optional PMC I/O Module

C – **Firmware/Operating System**
(B) Breeze Development Environment
(V) VxWorks - Loaded after review of customer's Wind River Site License
(L) TimeSys Linux- Loaded after review of customer's TimeSys License

800-0736	PCI-736 User's Manual

CYCLONE *Microsystems*

Call (203) 786-5536 e-mail to information @cyclone.com