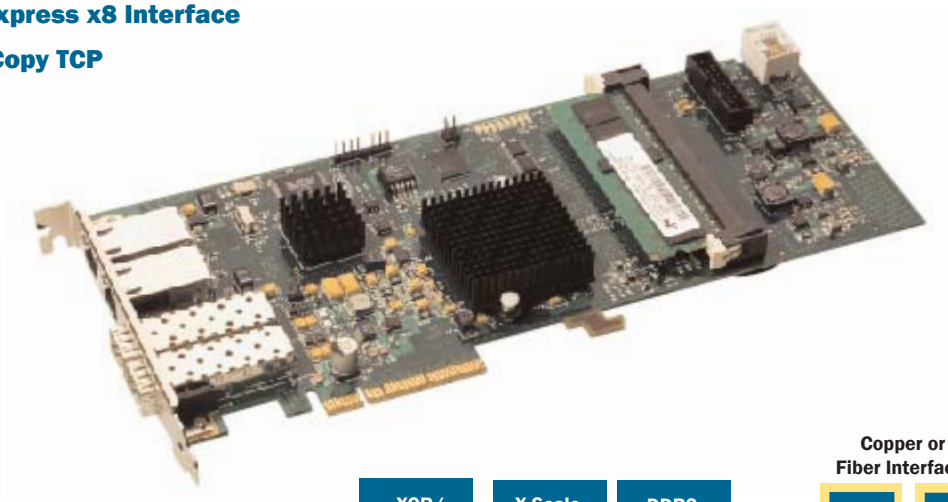
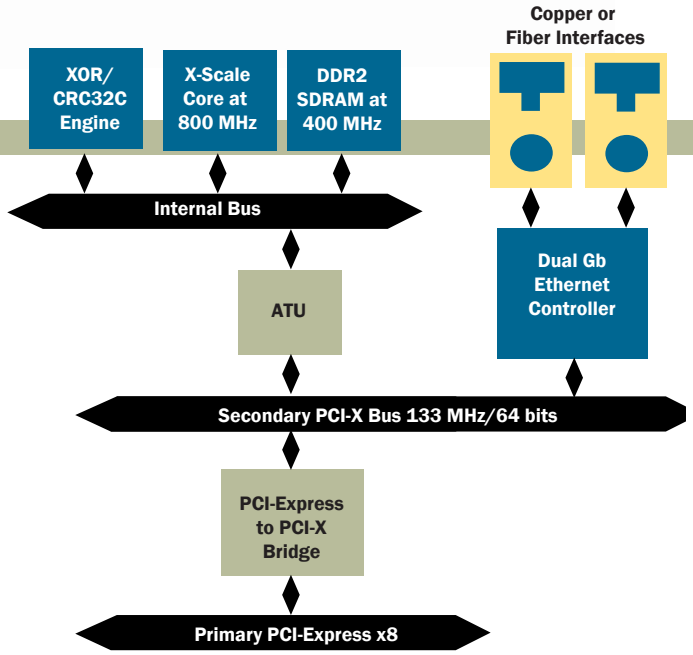
CYCLONE Microsystems
Intelligent I/O Controllers

PCI-E 754 Dual Gigabit Ethernet I/O Controller

- **Dual Gigabit Ethernet Ports**
- **Fast Embedded Processor**
- **PCI Express x8 Interface**
- **ZeroCopy TCP**





Features

- Intel 80333 XScale Microarchitecture
  - CPU core speed of 800 MHz
  - Integrated PCI-Express x8 to PCI-X 133 MHz Bridge
  - Two Channel DMA Controller with Scatter/Gather Support
  - RAID 5 XOR and CRC32C Engine
- DDR2 400 SDRAM
  - Up to 1 Gbyte
  - Dual Ported to Processor, Internal PCI-X Bus, and Host
  - Mini-DIMM Socket
- Primary PCI-Express x8 Interface
  - 20 Gbits/sec Bandwidth
- Secondary PCI-X Bus
  - 133 MHz/64 bit
- Dual Gigabit Ethernet Controller
  - Supports either two copper (1000BaseT) or two Fiber Optic (1000BaseSx/ 1000Base Lx) Ports
- Up to Eight Mbytes of FLASH
- Serial Console Port
- Board Support Packages
  - Breeze Development Environment
  - ZeroCopy TCP
  - VxWorks
  - Linux 2.6

Product Description

The PCI-E 754 is an Intelligent Dual Gigabit Ethernet I/O Controller that is applied in embedded systems for real-time protocol processing, security, and high throughput LAN applications. The PCI-E 750 supports Intel's highly integrated 80333 XScale Microarchitecture with a tightly coupled XScale Core, Memory Controller and PCI-Express to PCI-X bridge. A Dual Gigabit Ethernet Controller supports either two copper or fiberoptic Ethernet interfaces.

Embedded/Real-time development is supported by the availability of the Breeze Development Environment, VxWorks, ZeroCopy TCP, and Linux 2.6.

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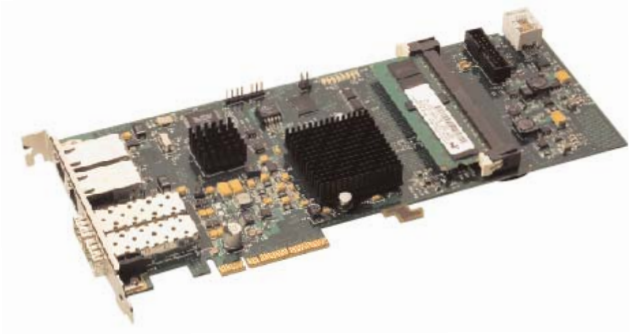

Technical Specifications

Processor

Microprocessor	Intel XScale 80333 at 800 MHz
On-chip Cache (I/D)	32 Kbyte, 32 way, set associative

Memory

Memory Capacity	256 Mbytes, 512 Mbytes, or 1 Gbyte
Architecture	Synchronous Double Data Rate (DDR2 SDRAM) with optional ECC
Performance	400 MHz
Flash	4, 8, or 16 Mybtes

PCI-Express Interface

PCI Express x8

Asynchronous Serial Port

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

Ethernet Interface

Controller	82546GC Dual Gigabit Ethernet Controller with Integrated PHY
Interface Speed	1000Base-T/100Base-T/10Base-T Auto Negotiable
Connectors	1000Base Tx- Dual RJ-45, CAT 5 UTP or 1000Base-Fx - Dual SFP
LEDs	Activity and Link Status LEDs for each Ethernet Port

Miscellaneous

Two Temperature Sensors

Environmental

Physical Dimensions	PCI Mid-Length Card 9.4” wide and 4.2” high
Operating Temperatures	0 to 55 Degrees Celsius
Storage Temperatures	– 55 to 125 Degree Celsius
Relative Humidity	0 – 95%
Power Requirements	
+3.3V	6.93 Watts Watts Typical, 9.9.00 Watts Maximum
+12V	13.20 Watts Typical, 18.00 Watts Maximum

PCI-E 754 Ordering Information

CM-754-*ABB-CC-D*

***A* – Flash ROM**

(1) 4 Mbytes
(2) 8 Mbytes
(3) 16 Mbytes

***BB* – Fiber Transceivers**

(F0) No Transceivers Populated
(F1) 850nm
(F2) 1310nm
(C0) Copper Only – No SPF (L) – Linux 2.6

***CC* – Memory Capacity**

(1G) 1 Gbyte
(5M) 512 Mbytes
(2M) 256 Mbytes

***D* – Firmware/Operating System**

(B) – Breeze
(V) – VxWorks 5.4
(Z) – ZeroCopy TCP
(L) - Linux 2.6

Commonly Stocked Configuration	CM754-1F0-2M-B
800-0754	PCI-E 754 User’s Manual

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