

# PCIe-755 Dual Core Intelligent I/O Controller with Six Gigabit Ethernet Ports

- ◆ Six Gigabit Ethernet Ports
- ◆ Fast Embedded Processor
- ◆ PCI Express x8 Interface
- ◆ ZeroCopy TCP
- ◆ RoHS Compliant

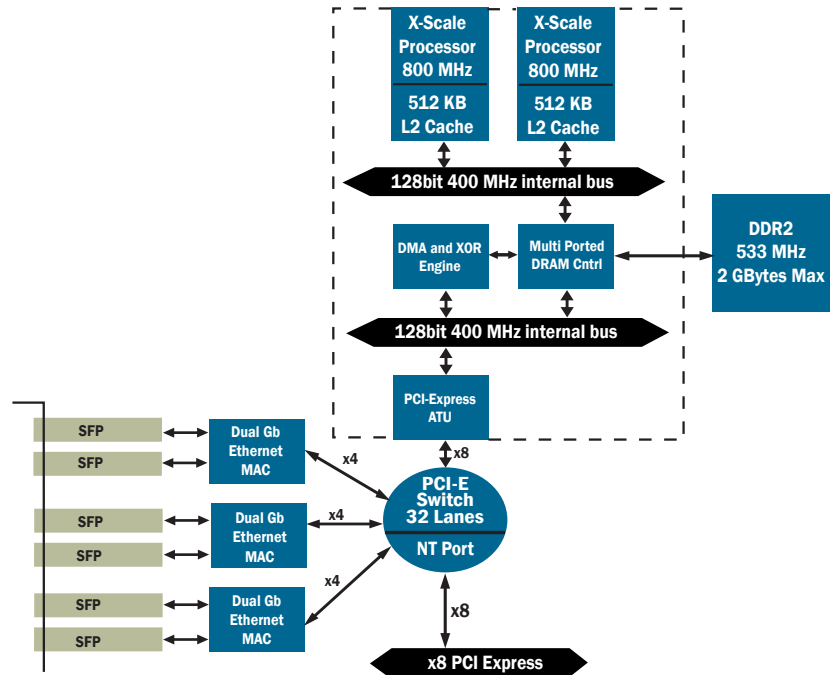


**PCI EXPRESS**



## Features

- ◆ Intel 81342 Dual Core XScale Processor
  - CPU core speed of 800 MHz
  - 512 KByte L2 Caches for each processor
  - DMA Controller with Scatter/Gather Support
  - RAID 5 & 6 XOR and CRC32C Engine
  - 1 Mbyte SRAM
- ◆ DDR2 533 SDRAM
  - Up to 2 Gbytes
  - Dual Ported to Processors, Internal bus and Host
  - Mini-DIMM Socket
- ◆ Primary PCI-Express x8 Interface
  - 20 Gbits/sec Bandwidth
  - Non-Transparent interface
- ◆ Six Gigabit Ethernet Controllers
  - Six Fiber Optic (1000BaseSx/1000BaseLx) Ports
  - SFP Connectors on end panel
- ◆ Up to Eight Mbytes of FLASH
- ◆ Serial Console Port
- ◆ Board Support Packages
  - Breeze Development Environment
  - ZeroCopy TCP
  - VxWorks
  - Linux 2.6



## Product Description

The PCIe-755 is an Intelligent Six Port Gigabit Ethernet I/O Controller that is applied in embedded systems for real-time protocol processing, security, and high throughput LAN applications. The PCIe-755 supports Intel's highly integrated 81342 XScale Microarchitecture with a tightly coupled Dual Core XScale Processor, Memory Controller, and PCI-Express Interface. A Six Gigabit Ethernet Controller supports 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

<b>Microprocessor</b>	Intel Dual Core XScale 81342 at 800 MHz
<b>On-chip L1 Cache (I/D)</b>	32 Kbyte, 32 way, set associative
<b>On-chip L2 Cache</b>	512 Kbyte per processor

#### Memory

<b>Memory Capacity</b>	256 Mbytes, 512 Mbytes, 1 Gbyte, or 2 Gbytes
<b>Architecture</b>	Synchronous Double Data Rate (DDR2 SDRAM) with optional ECC
<b>Performance</b>	533 MHz
<b>Flash</b>	4, 8, or 16 Mybtes

#### PCI-Express Interface

**PCI Express x8**

#### Asynchronous Serial Port

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

#### Ethernet Interface

<b>Controllers</b>	Three 82571 Dual Gigabit Ethernet Controllers
<b>Interface Speed</b>	1000Base-Ls/Sx/100Base-Lx/Sx/10Base-Lx/Sx Auto Negotiable
<b>Connectors</b>	1000Base-Fx - Six SFP
<b>LEDs</b>	Activity and Link Status LEDs for each Ethernet Port

#### Miscellaneous

Two Temperature Sensors

### Environmental

<b>Physical Dimensions</b>	PCI Express Full Length Card 12.883" Long and 4.2" High
<b>Operating Temperatures</b>	0 to 55 Degrees Celsius
<b>Storage Temperatures</b>	- 55 to 125 Degrees Celsius

<b>Relative Humidity</b>	0 - 95%
<b>Power Requirements</b>	
+3.3V	4.86 Watts Typical 7.81 Watts Maximum
+12V	18.10 Watts Typical 25.85 Watts Maximum

### PCIe-755 Ordering Information

#### CM-755-ABB-CC-D

##### A - Flash ROM

<b>1</b>	4 Mbytes
<b>2</b>	8 Mbytes
<b>3</b>	16 Mbytes

##### BB - Fiber Transceivers

<b>F0</b>	No Transceivers Populated
<b>F1</b>	850nm
<b>F2</b>	1310nm

**Commonly Stocked Configuration** CM755-1F0-5M-B

##### CC - Memory Capacity

<b>2G</b>	2Gbyte
<b>1G</b>	1Gbyte
<b>5M</b>	512 Mbytes
<b>2M</b>	256 Mbytes

##### D - Firmware/Operating System

<b>B</b>	Breeze
<b>V</b>	VxWorks 5.4
<b>Z</b>	ZeroCopy TCP

**800-0755**

PCIe-755 User's Manual