



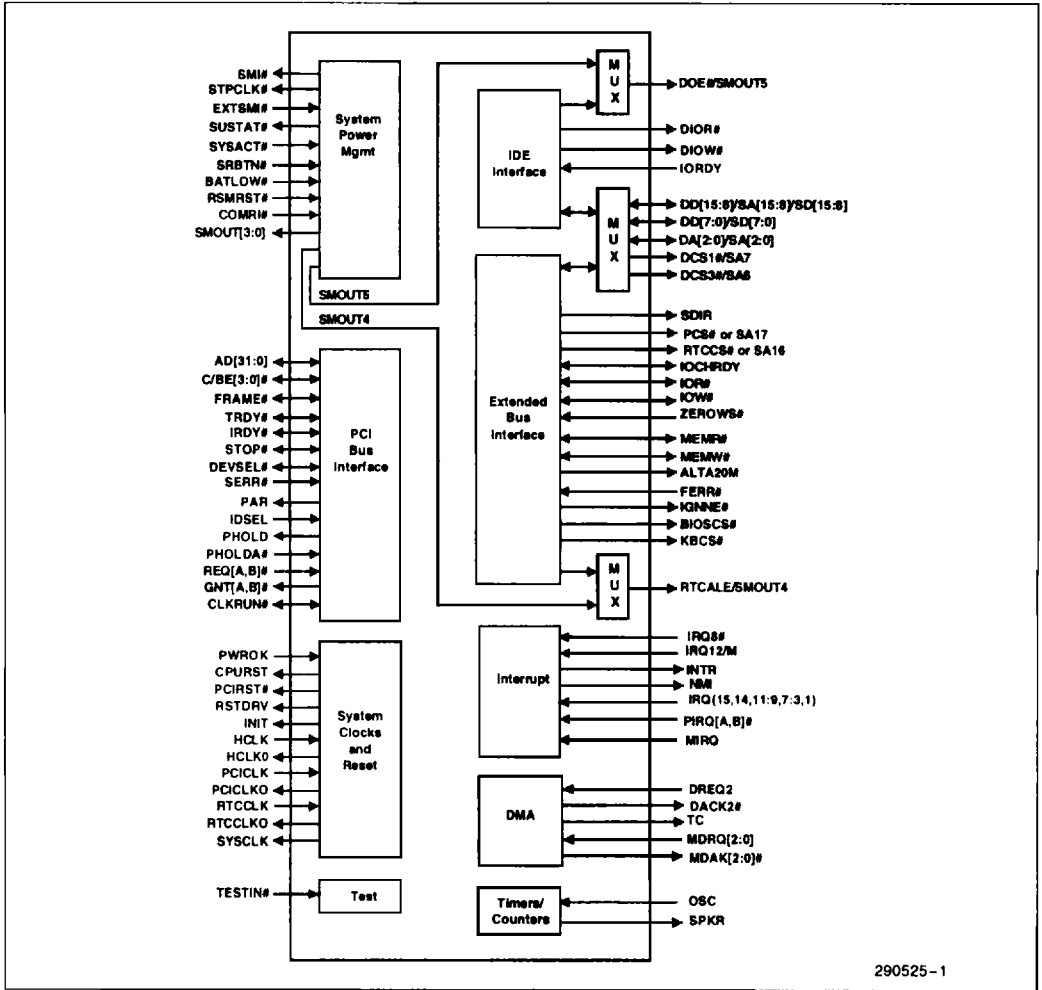
82371MX PCI I/O IDE XCELERATOR (MPIIX)

- Provides a Bridge between the PCI Bus and Extended I/O Bus
 - PCI Bus; 25 MHz–33 MHz
 - Extended I/O Bus; 7.5 MHz–8.33 MHz
- System Power Management (Intel SMM Support)
 - Programmable System Management Interrupt (SMI)— Hardware/Software Events, EXTSMI#
 - Programmable CPU Clock Control (STPCLK#) With Auto Clock Throttle
 - Peripheral Device Power Management (Local Standby)
 - Suspend State Support (Suspend-to-DRAM and Suspend-to-Disk)
- Enhanced DMA Functions
 - Two 8237 DMA Controllers
 - Compatible DMA Transfers
 - PC/PCI DMA Expansion for Docking Support
- Fast IDE Interface
 - PIO Mode 4 Transfers
 - 2x16 Bit Posted Write Buffer and 1x32 bit Read Prefetch Buffer
- Plug-n-Play Port for Motherboard Devices
 - 3 Steerable DMA Channels
 - 1 Steerable Interrupt Line (Plus 2 Steerable PCI Interrupts)
 - 1 Programmable Chip Select
- Functionality of One 82C54 Timer
 - System Timer
 - Refresh Request
 - Speaker Tone Output
- Functionality of Two 82C59 Interrupt Controllers
 - 14 Interrupts Supported
 - Independently Programmable for Edge/Level Sensitivity
- X-Bus Peripheral Support
 - Chip Select Decode
 - Controls Lower X-Bus Data Byte Transceiver
- Non-Maskable Interrupts (NMI)
 - PCI System Error Reporting
- NAND Tree for Board-Level ATE Testing
- 176-Pin TQFP

The 82371MX PCI I/O IDE Xcelerator (MPIIX) provides the bridge between the PCI bus and the ISA-like Extended I/O expansion bus. In addition, the 82371MX has an IDE interface that supports two IDE devices providing an interface for IDE hard disks and CD ROMs. The MPIIX integrates many common I/O functions found in ISA based PC systems—a seven channel DMA controller, two 82C59 interrupt controllers, an 8254 timer/counter, Intel SMM power management support, and control logic for NMI generation. Chip select decoding is provided for BIOS, real time clock, and keyboard controller. Edge/Level interrupts and interrupt steering are supported for PCI plug and play compatibility.

The MPIIX also provides the Extended I/O Bus for a direct connection to Super I/O devices providing a complete PC compatible I/O solution. MPIIX also provides support for the "Mobile PC/PCI" DMA Expansion protocol that enables the implementation of Docking Stations with full ISA and PCI capability without running the full ISA bus across the docking connector. For motherboard plug and play compatibility, the 82371MX also provides three steerable DMA channels, up to three steerable interrupt lines, and a programmable chip select. The interrupt lines can be routed to any of the available ISA interrupts.

The MPIIX's power management function supports SMI# interrupt sources, extensive clock control (including Auto Clock Throttling), peripheral power idle detection with access traps, system Suspend-to-DRAM and Suspend-to-Disk.



82371MX MPIIX Simplified Block Diagram

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The complete document for this product is available from Intel's Literature Center at 1-800-548-4725.