

# M5281

## Ali Serial-ATA and Parallel-ATA Host Controller

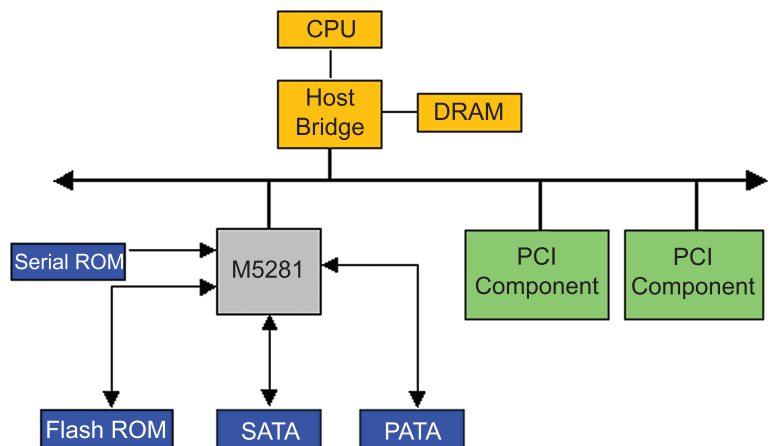


- Serial ATA Interface
- Dual Channel Parallel ATA Interface
- Flash ROM Interface
- Serial ROM Interface
- PCI Interface/Cardbus Interface
- 160-pin LQFP Package

The M5281 provides personal computer systems with PCI/Cardbus device solution of the highest integration: It includes two Serial-ATA Host controllers for supporting 2 ports, compliant with Serial ATA 1.0 specifications, one fully Parallel-ATA Host controller for supporting two channels and a Flash ROM controller.

The M5281 provides PCI interface up to 33/66 MHz. It is PCI specification 2.3 compliant.

Through the high integration of the M5281, board designers can build a cost-effective motherboard with the rich features of SATA and PATA functions.



M5281 System Block Diagram

# M5281

## ALi Serial-ATA and Parallel-ATA Host Controller

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### Serial-ATA Interface

- Supports SATA 1.0 (High Speed Serialized AT Attachment, Revision 1.0), 1.5 Gb/s data rate
- Completely SW transparent with Parallel ATA
- Supports Host adapter register interface (SCR, Status and Control Registers)

### Parallel-ATA Interface

- Supports Ultra DMA Mode Transfers up to Mode 6 Timing (133 Mbytes/sec)
- Supports 48-bit LBA (Large Disk), hard driver larger than 137 GB
- Supports PIO Modes up to Mode 4 Timing, and Multiword DMA Mode 0,1,2 with Independent Timing of up to 4 drives
- Dedicated Pins of ATA Interface for each Channel
- Supports Tri-state IDE Signals

### PCI/Cardbus Interface

- Compliant with PCI Specification revision 2.3
- Supports up to 33/66 MHz PCI interface clock
- High performance PCI bus master

### Flash ROM Interface

- Supports up to 64K Flash ROM
- Supports both Read/Write cycle

### Serial ROM Interface

- Support MicroWire interface for serial ROM
- Supports automatic loading of subsystem vendor ID and subsystem device ID from the serial ROM to the configuration register

### Other

- Supports Daisy Chain structure up to 3 chips in one PCI slot/device

0.18 um CMOS process

1.8 V core, 3.3 V I/O, 5V tolerant input

160 pin LQFP Package

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