JMB361
PCI Express to SATA II and PATA Host Controller

Overview

JMB361 is a single chip, one-lane PCI Express to one-port Serial ATA II and one-port PATA Host Controller. The JMB361 is designed to provide one-port SATA II and one-port PATA connectivity. The JMB361 supports both AHCI and Legacy IDE controller to increase system feasibility, including Native Command Queuing (NCQ), Hot Plugging, ATAPI Device Supporting, Port Multiplier with Command-based Switching Supporting, Programmable Output Swing Control to fit SATA II Gen2i and Gen2m (External SATA Connection, eSATA). It features PCI Express bus and Serial ATA II interface to express high performance storage devices.

Feature

Compliance

- Compliant with ***Serial ATA AHCI (Advanced Host Controller Interface) Spec. Reversion 1.0***
- Compliant with ***Bus Master Programming interface for IDE ATA Controllers Revision 1.0***
- Compliant with ***PCI Express Base Spec. Revision 1.0a***
- Compliant with ***Serial ATA High Speed Serialized AT Attachment Spec. Revision 1.0a***
- Compliant with ***Serial ATA II: Extensions to Serial ATA 1.0a Revision 1.1***
- Compliant with Gen2i and Gen2m ***Serial ATA II: Electrical Spec. Revision 1.0***

Overall

- Integrated 1-Lane PCI Express PHY and 1-port SATA II PHY
- Integrated two PLL for both PCI Express bus and SATA II interface
- Output swing control and Automatic impedance calibration for both PCI Express and SATA II PHY
- Supports up to 64K Byte external Flash for BIOS expansion
- Supports a slave SMBus interface (follow ***System Management Bus Specification Revision 1.1***)
- Fabricated 0.18um/3.3V UMC CMOS Standard Logic Process with 1.8V and 3.3V
- Available in 100-pin LQFP package
- Pin compatible with JMB363 (2-port SATA II & 1-port PATA Host Controller)

PCI Express

- Supports 1-Lane 2.5Gbps PCI Express bus
- Internal native interface multiplexed to 1-port SATA II and 1-port PATA
- All registers accessible in unified memory space

SATA II/PATA

- Supports 1-port 3.0Gbps SATA II interface
- Supports Native Command Queue (NCQ) on SATA II port

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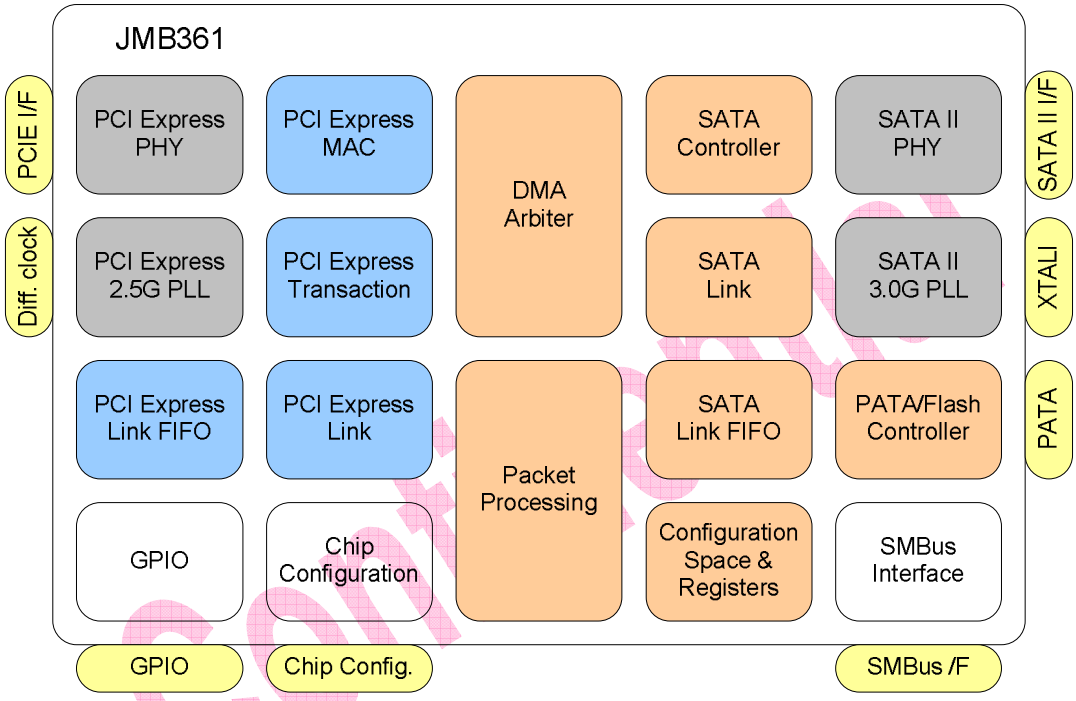
- Supports Hot Plugging like USB on SATA II port
- Supports SATA II Gen2i and Gen2m (External SATA Connection, eSATA)
- Supports Port Multiplier with Command-based Switching on SATA II port
- Supports up to UDMA6 transfer mode of PATA
- Supports up to 3 storage device connection
- Supports up to 0,1,0+1,JBOD RAID function

Functional Block Diagram



Functional Block Diagram of JMB361

Product Information

Name	Description
JMB361	PCI Express to SATA II and PATA Host Controller

Document

1	JMB361 Data Sheet
2	JMB361 Design Specification
3	JMB361 Hardware Design Guide
4	JMB361 Hardware Schematic

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