



JMB363

PCI Express to SATA II and PATA Host Controller

Overview

JMB363 is a single chip, one-lane PCI Express to two-port Serial ATA II and one-port PATA Host Controller. The JMB363 is designed to provide two-port SATA II and one-port PATA connectivity. The JMB363 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 2-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 JMB361 (1-port SATA II & 1-port PATA Host Controller)

PCI Express

- Supports 1-Lane 2.5Gbps PCI Express bus
- Internal native interface multiplexed to 2-port SATA II and 1-port PATA
- All registers accessible in unified memory space

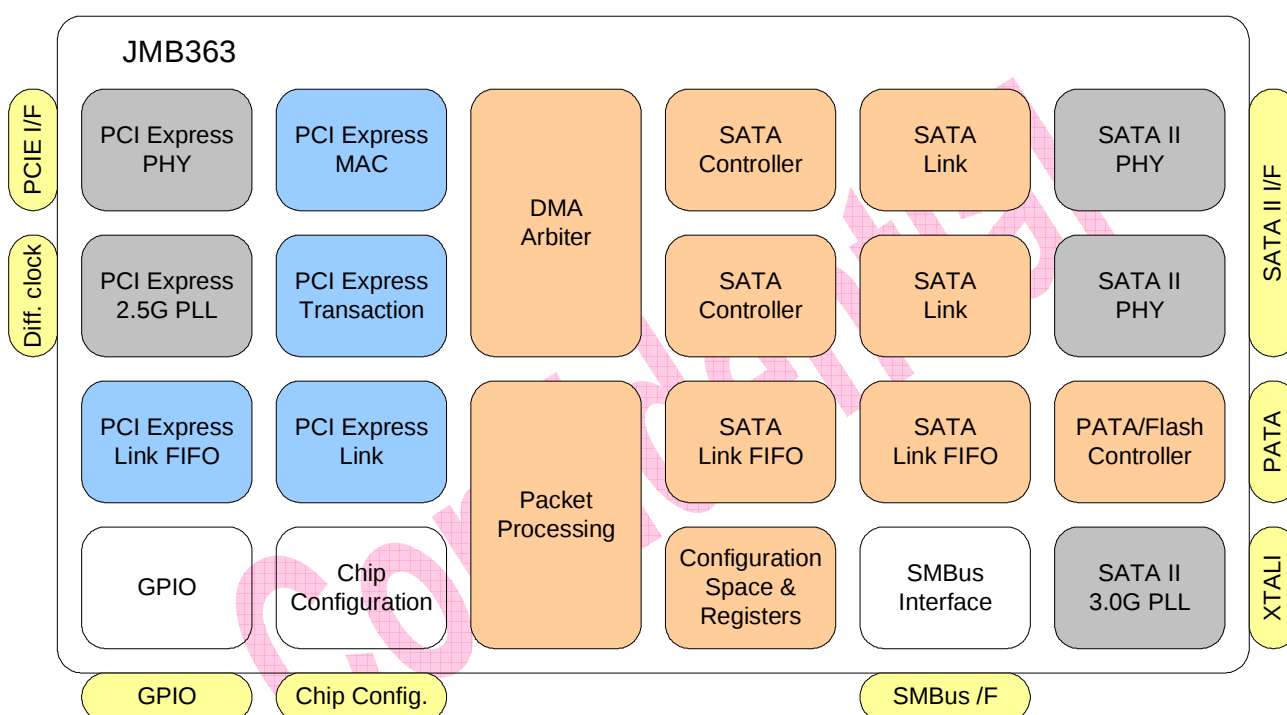
SATA II/PATA

- Supports 2-port 3.0Gbps SATA II interface
- Supports two independent SATA II channels (separate logic and FIFO)



- Supports Native Command Queue (NCQ) on SATA II port
- 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 4 storage device connection
- Supports up to 0,1,0+1,JBOD RAID function

Functional Block Diagram



Functional Block Diagram of JMB363

Product Information

Name	Description
JMB363	PCI Express to SATA II and PATA Host Controller

Document

1	JMB363 Data Sheet
2	JMB363 Design Specification
3	JMB363 Hardware Design Guide

Contact Information

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4	JMB363 Hardware Schematic
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