JM20330
Serial ATA Bridge Chip

Description

JMicron's JM20330 is a single chip solution for serial and parallel ATA translation. It includes the Serial ATA PHY, Link, Transport, and Parallel ATA (application layer) controller. The Serial ATA physical, link, and transport layers are compliant to Serial ATA 1.0a. JM20330 supports 1.5GHz data rate. The application layer supports both the ATA register command set and PACKET command set, which could drive both Hard Disk Drive and ATAPI Optical Storage such as CR-ROM, CD-RW, DVD-ROM, DVD-RW, etc. The Serial ATA and the Parallel ATA application layer support both host and device operation and can be configured through a single pin.

Features

- Serial ATA 1.0a Specification compliant
- ATA/ATAPI PIO mode 0 to 4
- ATA/ATAPI Ultra DMA of transfer rate 16.7, 25, 33, 48, 66, 100, 133, and 150MB/s.
- ATA/ATAPI LBA48 addressing mode associated with 2-byte sector count
- Support Serial ATA hot-plug
- Ultra low power consumption
- Work for AC couple between the transmitter and the receiver
- Provide specified OOB signal detection and transmission
- Support Spread Spectrum Clocking to reduce EMI
- Support 25MHz Reference Clock
- Support Partial/Slumber power management
- Provide adjustable TX signal amplitude and pre-emphasis level
- Master/Slave support

Quick Reference

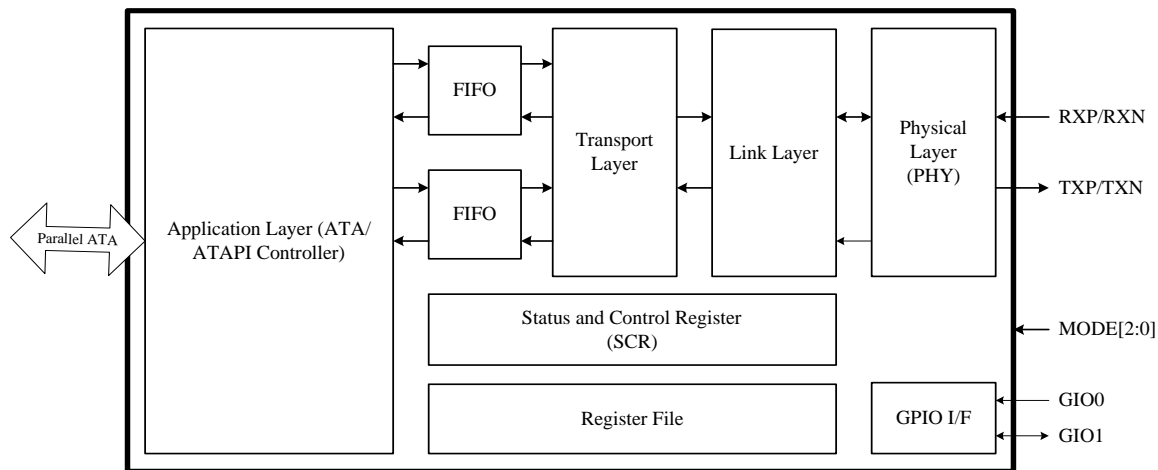|	
Signal Bit Rate	1.5 Gbps
Spread Spectrum	-0.5% to 0.0
Power Supply	3.3V and 1.8V
ESD Protection	2000 V
Host and Device	Programmable
Adj. Amplitude	2 levels
Adj. Pre-emphasis	4 levels
Package	64-pin TQFP
Applications	All SATA products • Mass storage devices • Optical storage • Dongle bridge • Storage system

Functional Block Diagram
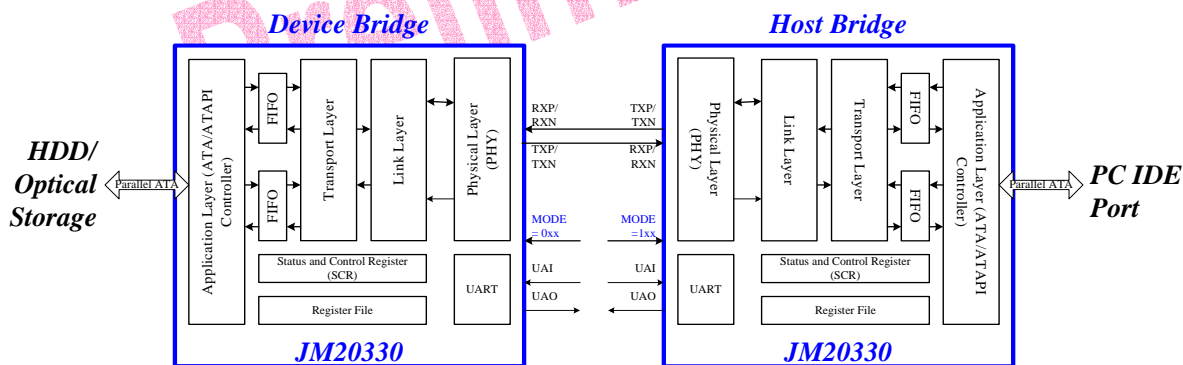

Fig. 1 Functional Block Diagram of JM20330

Applications

Fig. 2 JM20330 Host and Device bridge system diagram

Product Information

Name	Description
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Design Kit

1	JM20330 Data Sheet
2	JM20330 Design Guide
3	Application EVB

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