JMS561 USB3.0 to Dual SATA GenIII Ports Bridge Chip

Overview

JMicron JMS561 is a Supper Speed to Dual SATA GenIII Ports bridge chip. It integrated two independent SATA channels and a micro-processor. With proper setting, the chip can be configured as 1 to 2- ports Serial ATA III Port Multiplier or hardware striping & mirror. The JMS561 is able to reach a data transmission rate above 400M bytes per second when paired with an SSD module using JMicron's JMF667 SSD controller. The readings were measured by IOMeter, a gauge for storage device performance, with a variety of queue depths and worker number settings, on a platform with an xHCI host on an Intel Panther Point C1 stepping PC, running Windows 8 Build 8315 Core 2. Enabling USB Attached SCSI Protocol (UASP) on the JMS561, increased the data transmission rate by as much as 30%.

JMS561 has passed the USB-IF test procedure for USB3.0 products and it won the Windows Hardware Certification approval.

Features

- ➤ Complies with Serial ATA International Organization: Serial ATA Revision 3.1
- ➤ Complies with Universal Serial Bus 3.0 Specification Revision 1.0
- ➤ Complies with USB Mass Storage Class Bulk-Only Transport (BOT) Rev. 1.0 Specification
- ➤ Complies with USB Attached SCSI Protocol (UASP) Rev. 1.0 Specification
- ➤ Supports USB Super-Speed/High-Speed/Full-Speed Operation
- ➤ Supports USB 2.0/USB 3.0 power saving mode
- ➤ Supports multi LUNs for USB 2.0/USB 3.0
- ➤ Supports port multiplier for eSATA
- ➤ Supports hardware RAID0 (striping) and RAID1 (mirror) over USB 2.0/USB 3.0/eSATA
- ➤ Flexible GPIOs for customized functions
- ➤ Provides a hardware control PWM
- ➤ Provides software utilities for downloading the upgraded firmware code under USB2.0/USB3.0/eSATA
- ➤ Design for Windows XP, Windows 7, Windows 8, MAC 10.3 or later versions
- ➤ 30MHz external crystal
- ➤ An embedded 2.5V to 1.3V voltage regulator
- ➤ An embedded 5.0V to 3.3V voltage regulator
- ➤ QFN 64 package

Block Diagram
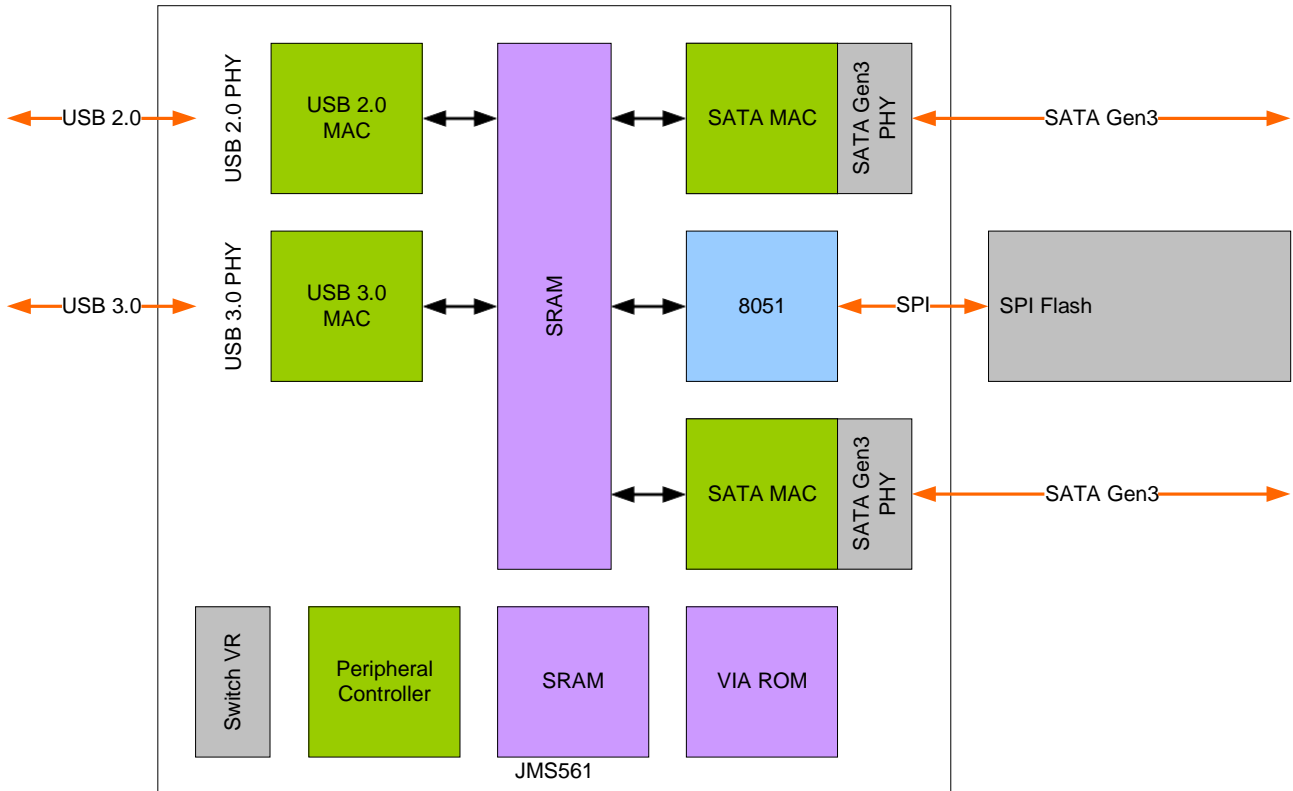
Applications

USB 2.0 and USB 3.0 to two SATA Gen3 HDDs
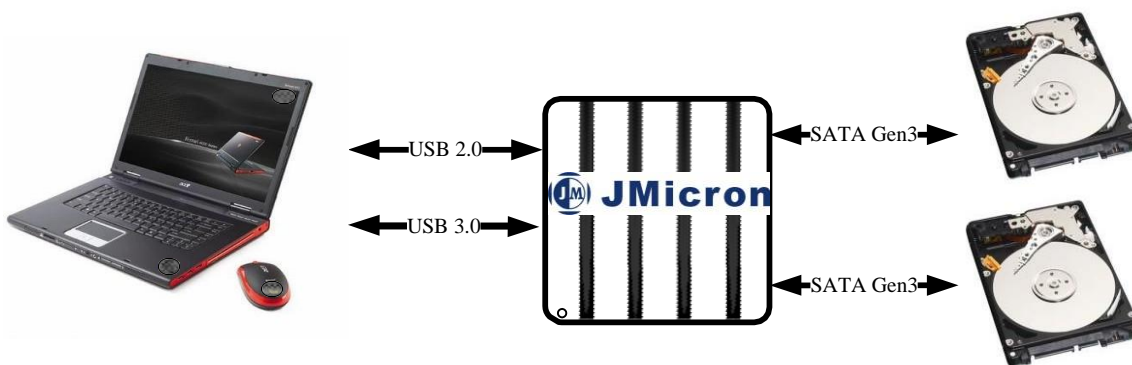
USB 2.0, USB 3.0 and eSATA 6G to one SATA Gen3 HDD

USB 2.0

USB 3.0

eSATA 6G

JMicron

SATA Gen3