PL-3507
Hi-Speed USB & IEEE1394
Combo to IDE Bridge Controller

OVERVIEW

The PL-3507 is a high performance combo bridge solution for connecting USB2.0 interface or IEEE1394 interface to ATA (AT attachment) or ATAPI (AT attachment with Packet Interface) data storage devices, such as hard disk drives, CD-ROM, CD-R, CD-RW, DVD and DVD+RW. This single chip bridge controller incorporating the features required by the demanding market while reducing the number of components on the system board to provide the most cost-effective solution.

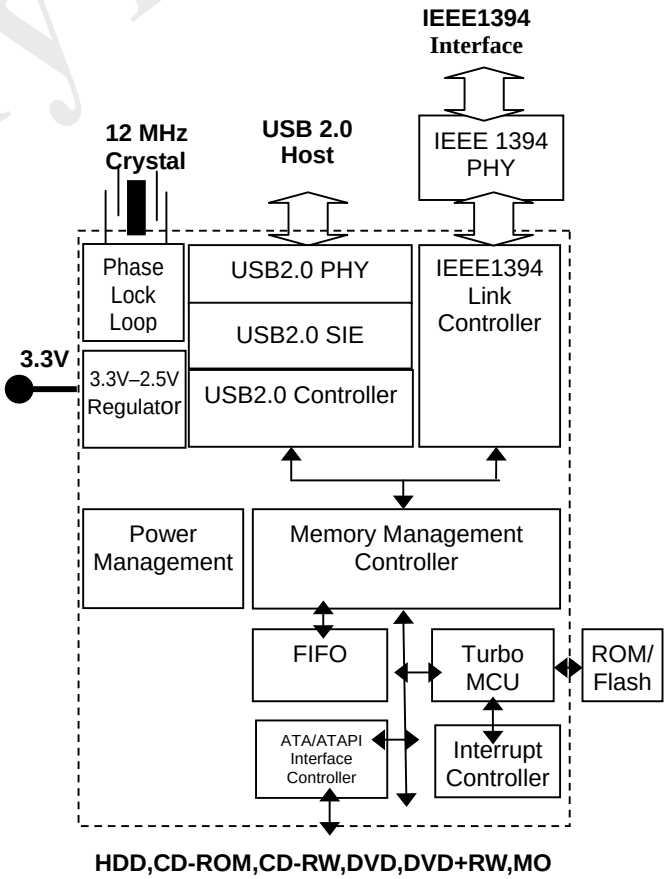
The USB2.0 interface of PL-3507 conforms to USB 1.1 and USB 2.0 specifications connecting to host computer via USB port at maximum 480 Mbps data transfer rate.

The IEEE1394 interface of PL-3507 is compliant with IEEE Std 1394-1995 and IEEE P1394a specification and operates at speeds of 100, 200 and 400 Mbps. In addition, with the built-in SBP2 (Serial Bus Protocol 2) hardware engine, the data transfer rate can be enhanced over 35 MBps.

FEATURES

- Auto-detect function to select connection on either USB2.0 interface or IEEE1394 interface.
- Built-in USB2.0 PHY.
- USB 1.1 and USB 2.0 compliant and USB Mass Storage Class Bulk-Only Transport Specification Compliant
- IEEE 1394-1995 and IEEE P1394a compliant
- Built-in hardware automated SBP2 protocol engine for IEEE1394 device connection which includes:
  - Management ORB fetch engine.
  - Command ORB fetch engine.
  - Page table fetch engine.
  - Response packet generate engine.
- Fully ATA/ATAPI compliant and supporting PIO mode 0-4, Multiword DMA mode 0-2 and Ultra DMA mode 0-4
- Embedded 4k Bytes data FIFO shared for USB2.0 and IEEE1394 transfer.
- Embedded high performance MCU.
- Embedded 3.3v to 2.5v regulator to supply the power of 0.25u process core circuit
- No driver is needed on Microsoft Windows 2000, ME, XP or above, Apple MacOS9.2 or above. (Vender driver may be needed on Windows 98SE for USB device)
- Package type: LQFP128pin

BLOCK DIAGRAM



Preliminary Release

Prolific Technology Inc.
7F, #48, Sec.3, Nan-Kang Rd., Taipei, Taiwan 115, ROC
Tel: 886-2-2654-6363 Fax: 886-2-2654-6161
E-mail : sales@prolific.com.tw
http://www.prolific.com.tw