



# PL-2518

## Turbo Hi-Speed USB Flash Disk Controller

### OVERVIEW

The PL-2518 Turbo Hi-Speed USB Flash Disk Controller is an integrated circuit that supports data transfer between USB-equipped hosts (such as PC, PDA, MP3 Player) and NAND flash memory through the USB port at Hi-Speed transfer rate of 480Mb/s. This single chip controller consists of a hub and two mass-storage-class devices. It allows interface of up to 16 NAND flash memories to reach maximum 8GB disk size capacity with enhanced R/W performances up to 20MBytes/sec and 15MBytes/sec respectively.

The available NAND flash memories on board can generally be used as a normal single disk or partitioned into a standard/open mass storage device and a secured mass storage device. The sizes of the partitions can be easily configured and adjusted using the USB Flash Disk (UFD) utility program. To access the secured mass storage device or disk, users must first enter a password using the UFD utility program. The PL-2518 also allows a read-only function for the secured mass storage partition so users/vendors can preload their software driver and application program, or any other software utilities into the partition to save on extra disk cost and to enhance user-friendliness.

To take advantage of Plug and Play, the mass storage device is implemented according to the USB mass storage device class. Since the default driver is included within most of the current OS, no extra driver is needed for Linux, Mac OS, Windows ME/2000/XP and above. Prolific provides a separate Windows 98 driver and supports driver and utility customization.

The PL-2518 also provides options to customize this chip in showing the vendor identity. Users could modify the Vendor ID, Product ID, Language ID, manufacturer string, and product string of the final product.

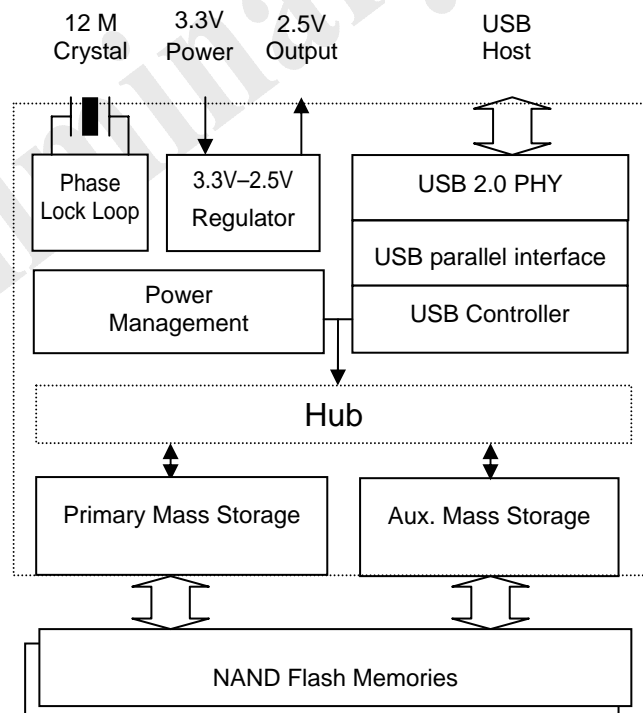
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## FEATURES

- Full compliance with the Universal Serial Bus Specifications v2.0
- On-chip USB 2.0 PHY
- On-chip 3.3V-2.5V 150mA regulator for internal circuit
- Advanced mode 8-bit NAND flash memory configuration
- Enhanced Read/Write performance up to 20Mbytes/s and 15Mbytes/s respectively
- Capable of interfacing up to 16 NAND flash memories to reach maximum performance of 16GB disk size capacity (using 8Gb NAND flash)
- Supports major Samsung/Toshiba/Hynix/ST NAND flash memories from 128Mb to 8Gb (either 16K or 128K block flash)
- Embedded hub function (optional)
- Auxiliary mass storage device implemented
- Support Read-Only and Hidden (Private area) Partitions
- Support Write-protect Switch function
- Support LED indicator for power and access mode
- USB Flash Disk Utility Program for disk partitioning and security function
- User-configurable Vendor/Product information and Serial Number support
- Mass storage class compatible, no driver needed in Linux, MAC OS, Windows

## BLOCK DIAGRAM



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