

## ATP865 PCI UltraDMA133 IDE Controller

### Overview

The ATP865 is a high performance IDE controller for PCI bus, aiming to suit file server class or RAID application and it meets the ATA-6 specification and IDE PIO mode, multiword DMA and Ultra DMA modes, up to 133MB/s rate.



ATP865 conforms to PCI 32-bit bus Master transfer capability including PCI enhanced data transfer commands (133 MB/s), and provides the Scatter/Gather to reduce interrupt handle and improve performance. Also, provides the PCI power management capability meet the motherboard and add-in card design. For enhanced performance, ATP865 Supporting RAID sets of up to four hard disk drives, and enables RAID 0 Striping, RAID 1 Mirroring and RAID 10 Mirrored Striping.

### Features

#### PCI Interface

- . PCI specifications Rev.2.2 compliant.
- . PCI Bus Power Management Interface Specification Ver.1.1 compliant.
- . Both PIO mode and master DMA mode support.
- . 32-bit PCI bus master burst data rate up to 133 MB/s.
- . Fully PCI configuration header support.
- . Scatter/Gather function compliant to Bus Master Programming Interface for IDE ATA Controller Rev 1.0.
- . Flash ROM interface setup utility and booting

#### IDE Interface

- . Conforms to ATA-6 specification.
- . Support PIO mode 0, 1, 2, 3 and 4 over 16.6MB/s data rate.
- . Supports multiword DMA mode 0, 1, 2 over 16.6MB/s data rate.
- . Supports Ultra DMA 0, 1, 2, 3, 4, 5, 6 up to

133MB/s rate.

- . Support two independent IDE channels (each channel supports two devices).
- . Independent timing for disk command and data register.
- . Programmable active and recovery cycle register timing per disk.
- . Each IDE channel consists of 128 byte FIFO for Write Back or Read Ahead buffers.
- . Support RAID 0, 1, 10, and JBOD function
- . Hot Plug Detection

#### Software

- . Windows 98SE, ME, 2000, XP, and CE.NET
- . Linux (Red Hat)
- . Netware, and FreeBSD

#### Package

- . 128-pin PQFP

**BLOCK DIAGRAM**

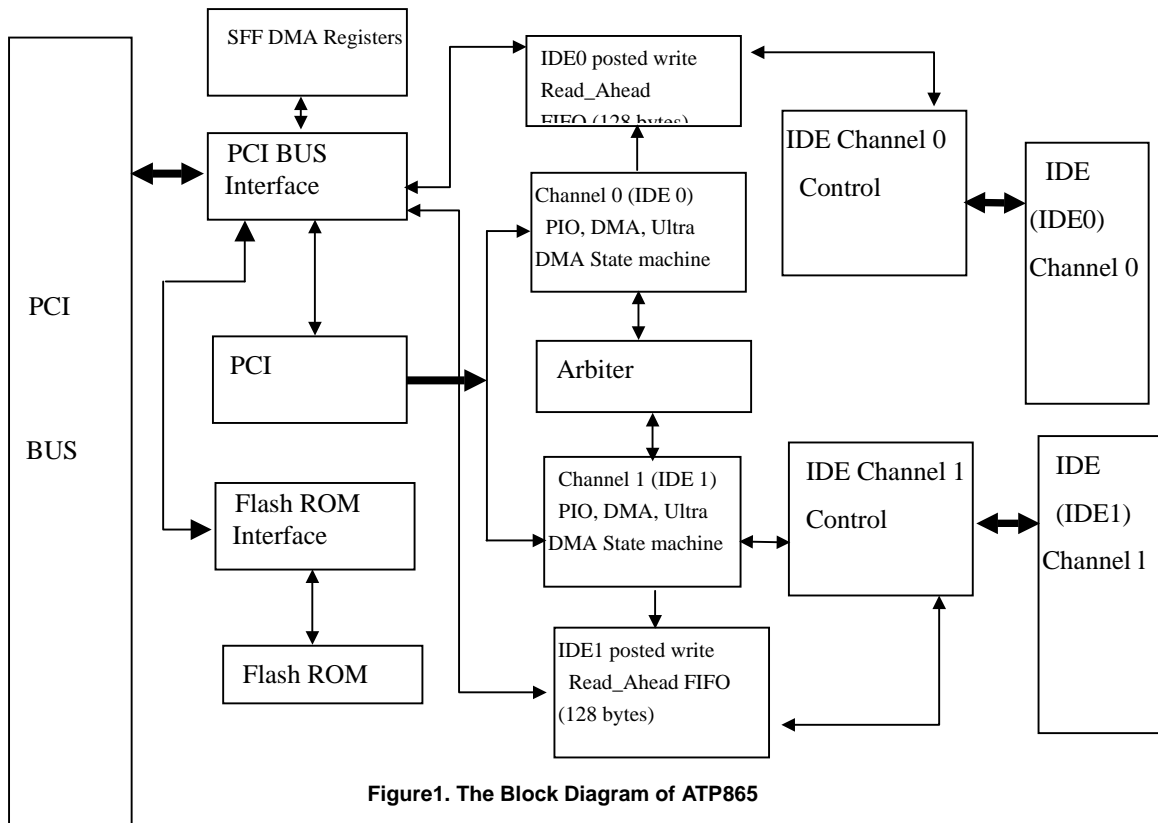


Figure1. The Block Diagram of ATP865

**Applications**

The ATP865 controllers can be used in a variety of storage applications. ATP865 devices enable high-performance UltraATA/133 solutions for LAN Disk, Network Attached Storage (NAS), Direct Attached Storage (DAS), and Nearline Storage Array applications. In addition, the ATP865 provide an ideal platform for development of RAID on Motherboard solutions.

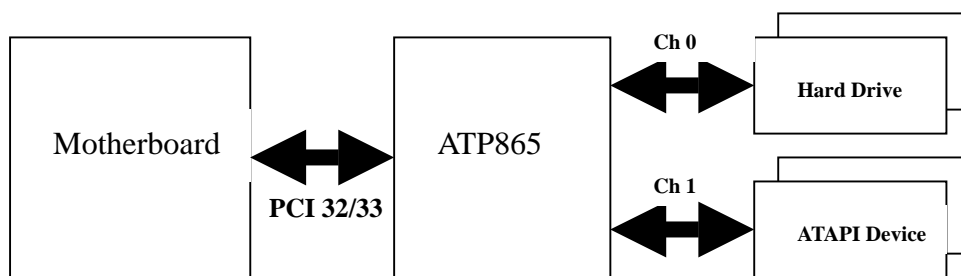


Figure2. The System Diagram of ATP865