Silicon Image's SiI 0649 is a standalone Ultra ATA/100 host controller designed to accommodate the transfer of large amounts of content-rich data common in today's multimedia applications. The SiI 0649 provides OEMs with a fast, proven interface for hard disk technology. Based on the Ultra ATA/100 interface specification, the SiI 0649 supports a 133 MB/s burst transfer rate and features 48-bit sector addressing, thereby enabling the utilization of drives with capacities greater than 137 GB.
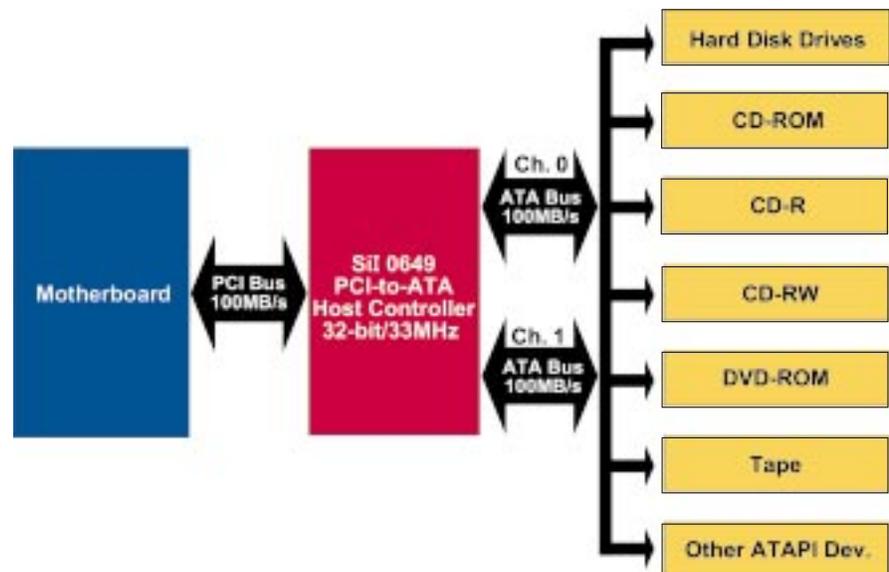
The SiI 0649 is a single-chip solution for designs based on chipsets without an integrated ATA host controller, or those requiring a greater number of ATA channels to accommodate the growing number of storage peripherals with an ATA interface. By simply adding a card with the SiI 0649 and loading the accompanying driver, any system with a PCI bus interface may upgrade to the Ultra ATA/100 interface.

The SiI 0649 enables PC manufacturers to support as many as four drives and incorporate the ATA/100 drive standards—all at a lower cost. With the SiI 0649, other manufacturers, such as motherboard, add-in card and embedded application companies, can incorporate a cost-effective, hard disk drive solution without sacrificing performance or flexibility.

For enhanced performance, the SiI 0649 can be packaged with Silicon Image's robust Medley™ ATA Software RAID, which optimizes throughput and data redundancy. Supporting RAID sets of up to four hard disk drives, Medley enables RAID 0 Striping, RAID 1 Mirroring and RAID 0+1 Mirrored Striping.

Key Benefits

- Supports ATA/100
- Provides 48-bit Addressing
- Supports External BIOS
- Includes Windows OS Drivers

SiI 0649 Features

General
- ATA/100
- 48-bit sector addressing
- Supports external BIOS
- 80-pin cable detect
- Compatible with Microsoft IDE/ATA drivers (Windows 95/98, ME, NT4, XP and 2000)

Transfer Rates
- PIO-0, 1, 2, 3, 4
- MDMA Mode 0, 1, 2
- Ultra 33, 66, 100
- Supports bus master DMA at 133 MB/sec burst rate

PCI Bus
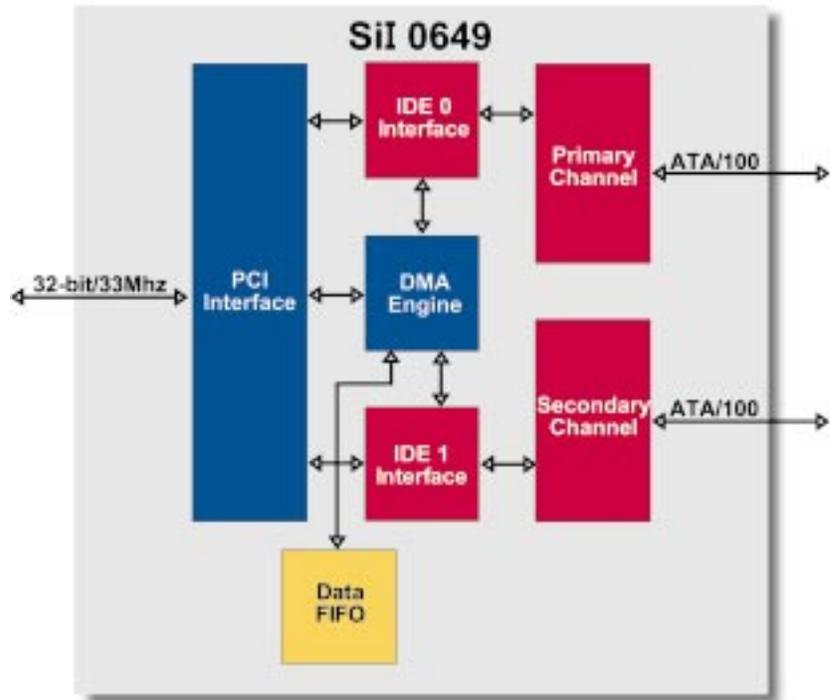- 32-bit, 33 MHz
- PCI 2.1 compliant

Power
- 3.3V Operating Voltage with 5V tolerant I/O
- ACPI: PCI Bus Power Management Spec 1.1 compliant

Package
- 160-pin, 20x20 mm LQFP (Low-profile Quad Flat Pack)

RAID (with Silicon Image's Medley™ ATA software RAID)
- RAID 0 (Striping)
- RAID 1 (Mirroring)
- RAID 0+1 (Mirrored-Striping)

Silicon Image's SiI 0649 Starter Kit

The CP0649ATA100 Starter Kit includes hardware, software and documentation to quickly bring ATA/100 and 48-bit sector-addressing compliance to computer systems, motherboards, add-in cards and embedded solutions.

Contents Include:

Hardware
- SiI 0649 reference design board
- 80 conductor ATA cable (Qty 2)

Software
- Base Operating System Drivers: DOS, Windows 95/98, ME, NT4, 2000 and XP
- SiI Configuration Utility
- Expansion BIOS
  - Base BIOS
  - Medley RAID BIOS
- RAID Operating System Drivers: Windows 98, ME, NT4, 2000, and XP

Documentation
- SiI 0649 Install Guide
- Medley ATA Software RAID Users Guide
- SiI 0649 Data Sheet

Part Number - SiI0649CL160