



The flagship of Silicon Image's new SATALink™ product family, the SiI 3112™ is the industry's first standalone host controller supporting Serial ATA, the new storage interface standard. The SiI 3112 enables OEMs to support new Serial ATA devices for the highest data transfer rates (1.5 Gbps burst), simpler disk drive cabling and easier PC assembly — all at a lower cost. Featuring a 32-bit 33/66 MHz PCI interface, the SiI 3112 supports two independent Serial ATA devices and can be incorporated in a motherboard design or a PCI add-in card.

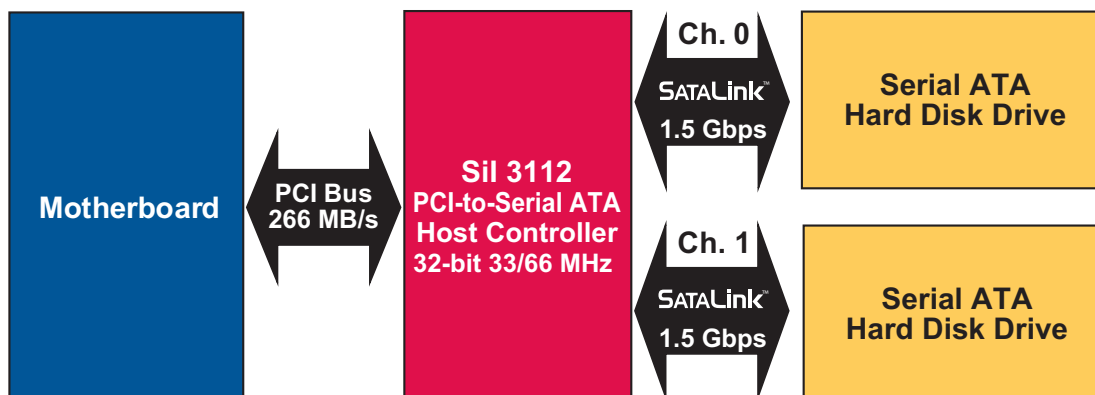
The single-chip SiI 3112 offers OEMs the flexibility of accommodating the new Serial ATA storage interface even if the core logic chipset does not have Serial ATA functionality. By simply incorporating the SiI 3112 through the motherboard or an add-in card and loading the accompanying driver, any system with a PCI bus interface may upgrade to the Serial ATA interface. Full support of legacy ATA features and commands is incorporated into the Serial ATA software and drivers.

With the SiI 3112, motherboard, add-in card, embedded systems and storage systems manufacturers can incorporate a cost-effective, hard disk drive interface solution offering superior performance and scalability.

The SiI 3112 leverages much of the circuit innovation at the physical layer of Silicon Image's proprietary reduced overhead Multi-layer Serial Link (MSL™) architecture, pioneered and proven through the company's market-leading PanelLink® products. MSL technology is a multi-layer approach to providing robust, cost-effective, multi-gigabit semiconductor solutions on a single chip for high-bandwidth applications.

SATA Applications

- Motherboards
- Add-in Cards
- Storage Systems
- Embedded Systems



Sil 3112 Features

SATALink™ PCI Host Controller

General

- Serial ATA - 1.5 Gbps (150 MB/s)
- Compliant with Serial ATA 1.0 specification
- Integrated Serial ATA Transport, Link logic and PHY
- 48-bit sector addressing
- Dual independent DMA channels with 256B FIFO per channel
- Virtual DMA
- Command buffering
- Supports up to 4 MB external Flash
- Supports external BIOS
- Supports spread spectrum clocking to reduce EMI
- Register compatible with parallel ATA
- Single, digital PLL architecture, with 1 PLL for both channels

Transfer Rates

- Supports PIO and DMA modes
- Supports bus master DMA at 1.5 Gbps burst rate

PCI Bus

- 32-bit, 33/66 MHz
- PCI 2.2 compliant

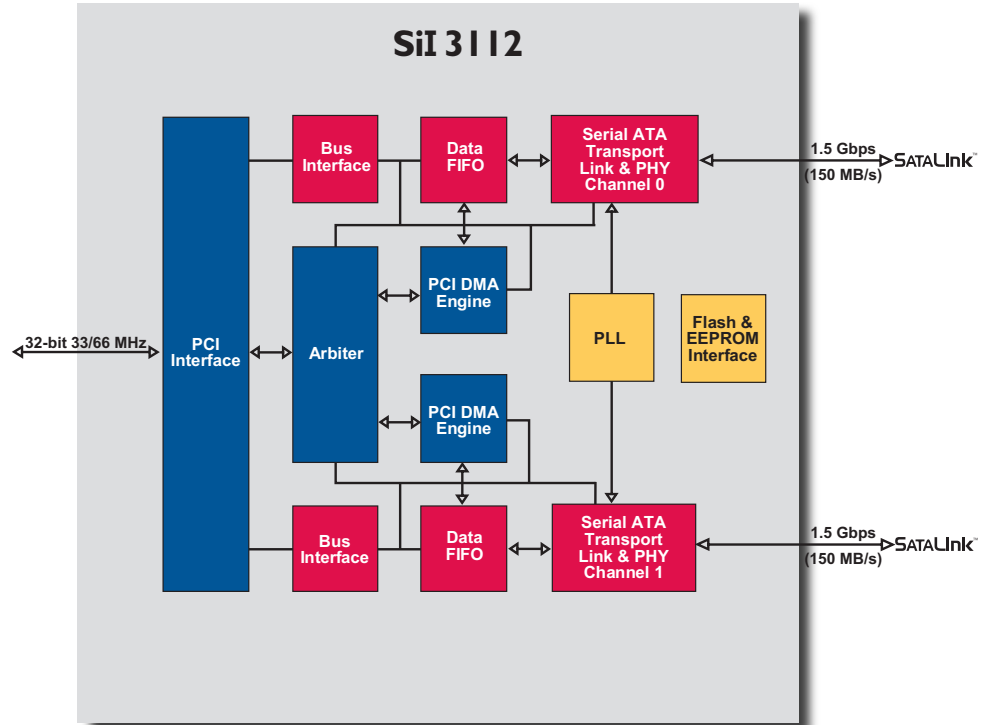
Power

- Core: 1.8V, I/O: 3.3V operating voltage with 5V tolerance
- ACPI: PCI Bus Power Management Spec 1.1 compliant

Package

- 144-pin, 20x20 mm TQFP (Thin Quad Flat Pack)

Part Number - SiI3112CT144



Software

- SATA Operating System Drivers: Windows 98, ME, NT4, 2000, XP and Linux
- RAID Operating System Drivers: Windows 98, ME, NT4, 2000, XP and Linux
- Supports RAID 0 (Striping) and RAID 1 (Mirroring) with Silicon Image Medley™ software RAID

Silicon Image's Sil 3112 Starter Kit

The CP3112SATA150 Starter Kit includes hardware, software and documentation to quickly bring Serial ATA interface capability to computer systems, motherboards, add-in cards and embedded solutions.

Contents Include:

Hardware

- Sil 3112 evaluation board
- Serial ATA cable (Qty 2)

Software

- SATA Operating System Drivers: Windows 98, ME, NT4, 2000, XP and Linux
- RAID Operating System Drivers: Windows 98, ME, NT4, 2000, XP and Linux
- Sil Configuration Utility
- Flash Utility
- SATA BIOS

Documentation

- Sil 3112 Install Guide
- Sil 3112 Data Sheet
- Sil 3112 Evaluation Board User's Guide

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