Product Info - SiSM672

The Integrated Mirage™3+ DX 9 Graphics Chipset for Intel® Pentium® 4

Overview

The SiSM672, supporting Intel® Core™2 Duo, Pentium® D, and Pentium® 4 series processors, features a PCI Express x16 Bridge, flexible Single-Channel DDR2-667 Memory controller, Mirage™ 3+ graphic engine, and SiS MuTIOL® Technology, which connects with the SiS968 MuTIOL® Media I/O.

The advanced Mirage™3+ graphics engine, combining with Pixel Shader 2.0, Texture Pipelines, Texture Filtering and Cubic Mapping technologies, enables the SiSM672 integrated chipsets to deliver excellent graphics performances under 2D and 3D conditions. With support of SiS Real Video Technology, the image quality and definition of digital entertainment devices, such as TV, VCD, and DVD can be presented perfectly and thoroughly under Windows Vista™ Premium Edition.

Pairing with the SiSM672 Northbridge chipset, the SiS968 Southbridge chipset has several unique features. It has been designed to focus on reducing the power-consumption. Therefore, it is able to actively adjust the power consumption of peripheral. With such an advanced technology, the SiS968 Southbridge chipset can save up to 50% of power for the system. Besides, the SiS968 Southbridge chipset is integrated with SiS proprietary MuTIOL® 1G technology to connect with the SiSM672 speedily. It supports 2 PCI Express interfaces, and 2 SATA 3G ports which allows up to 300MB/s of data transmission. Also, the SiS968 Southbridge supports 8 USB2.0 ports, which perfectly meets the requirement of connecting more and more
devices. Moreover, it supports the most advanced 8-channel High-Definition Audio surround sound to provide better sound effects, and supports Gigabit Ethernet to have faster internet access.

Key Features

SiS HyperStreaming™ Technology Empowered

Host Interface
- Supports Intel® Core™2 Duo/Pentium® D/Pentium® 4 processor
- Supports 800/533MHz Front-Side Bus processor

PCI Express Graphics interface
- PCI Express base Spec. 1.1 compliant
- Supports PCI Express base frequency 2.5GHz, and bandwidth per pair of 250MB/s
- Supports the maximum bandwidth, 4GB/s of each direction in x16 configuration

Single Channel Memory Controller
- Supports DDR2-667/533/400
- Supports two DIMMs
- Up to 2GB per DIMM with maximum memory size up to 4GB

SiS Mirage™ 3+ Graphics Engine
- Built-in a High performance DX9 graphic engine
- Supports High Definition Video interface for TV or LCD display
- Maximum 256MB share memory

High throughput MuTIOL® Connect interfaced to South Bridge Chip
- Proprietary interconnect between SiSM672 and South Bridge Chip
- Bi-Directional 16 bit Data Bus at 533MHz operating frequency

SiS968 The Southbridge for Windows Vista Ready

SiS MuTIOL® 1G Delivering 1GB/s Bandwidth
- Proprietary Interconnect between SiS north bridge and SiS968
- Bi-Directional 16 bit Data Bus at 533MHz Operating Frequency

PCI Express Controller
- PCI Express base Spec. 1.1 compliant
- Supports two PCI Express x1 ports

Serial ATA Host Controller
- Provides 2 independent ports for SATA, compliant with Serial ATA 2.5 Specification with transfer rate 300MB/s
- Compliant with AHCI 1.1 Specification
- Supports RAID 0, 1, and JBOD

**USB 2.0/1.1 Host Controller**
- One EHCI USB 2.0 Controller and 2 OHCI USB 1.1 Controllers
- Supports Total 8 USB 2.0/1.1 Ports
- Supports USB 2.0 High-Speed Device @480 Mb/s Transfer Rates

**High-Definition-Audio Controller**
- HD Audio v1.0 compliance

**Gigabit Ethernet MAC Controller**
- 10/100/1000Mbps triple speed
- MII/RGMII standard interface to support external PHY

**Serial Peripheral Interface Master Controller**
- Support two SPI devices
- Support 20/25/33MHz device

**Advanced Power Management**
- ACPI 3.0 and APM 1.2 Compliant

**Single IDE Channels with ATA 133/100**

**Support Up to 6 PCI Masters**

**LPC 1.1 Interface**

### Features & Benefits

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<tr>
<th>Features</th>
<th>Benefits</th>
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<tr>
<td><strong>64-bit Architecture</strong></td>
<td>The 64-bit architecture gives users the power to improve performance for many applications.</td>
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<td><strong>HyperStreaming Technology</strong></td>
<td>It makes streams of chipset data flow all over the paths efficiently, smoothly and intelligently. That can improve whole system performance.</td>
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<td><strong>Dual-Core Support</strong></td>
<td>Supports Intel® Core 2 Duo/Pentium® D/Pentium® 4 CPU with FSB 800MHz CPU with Hyper-Threading technology.</td>
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<td>Feature</td>
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<td><strong>PCI Express x16 Graphics Supporting</strong></td>
<td>Provide best system performance through high bandwidth 4.0GB/s.</td>
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<td><strong>SiS Mirage™ Graphic Engine</strong></td>
<td>Powered by SiS Mirage™ 3+ Graphics Engine, Microsoft DirectX 9.0 H/W compliant, Certified for Windows Vista Premium.</td>
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<td><strong>LCD-TV Support</strong></td>
<td>Dual view function support for LCD-TV, LCD-CRT or CRT-TV. Enrich your digital home experience.</td>
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<td><strong>High Definition Video Interface</strong></td>
<td>SiS new generation video interface, provides ultra high transmission speed and data bandwidth between Mirage™ 1 and Video Bridge.</td>
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<td><strong>DDR2 Support</strong></td>
<td>Single channel DDR2 memory architecture. Offers the maximum bandwidth up to 5.4GB/s (DDR2-667).</td>
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<td><strong>MuTIOL® 1G Technology</strong></td>
<td>Proprietary Interconnect between north bridge and south bridge. SiS MuTIOL® 1G delivers 1GB/s bandwidth.</td>
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<td><strong>Advance Host Controller Interface (AHCI)</strong></td>
<td>Provide the anticipated features of SATA to increase performance by optimizing the execution order of workloads.</td>
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<td><strong>SATA &amp; RAID functions</strong></td>
<td>Provides 2 independent SATA ports, compliant with Serial ATA 1.0 Specification, and supports RAID 0, 1, and JBOD configuration.</td>
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<td><strong>High Definition Audio (HDA)</strong></td>
<td>Perform high quality audio by supporting 192KHz high sampling frequency, 7.1 surround sound, and Dolby® Digital.</td>
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PCI Express x 1 support
Completely with support for PCI Express, it makes the ideal for connecting high-speed peripheral devices for multimedia applications.

Gigabit Ethernet
Gigabit Ethernet promises to revolutionize the world of data transmission. New multimedia applications that will benefit from Gigabit Ethernet include downloadable movie, television and music services which connect through the Internet, bypassing traditional methods of delivery.

USB2.0
Meets the requirement for increasing plug and play USB devices.

ATA133 enhancement
Fastest storage support. Increasing data/file transfer rate.