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Static Electricity Precautions

1. Don't take this motherboard and components out of their original static-proof package until you are ready to install them.
2. While installing, please wear a grounded wrist strap if possible. If you don't have a wrist strap, discharge static electricity by touching the bare metal of the system chassis.
3. Carefully hold this motherboard by its edges. Do not touch those components unless it is absolutely necessary. Put this motherboard on the top of static-protection package with component side facing up while installing.

Pre-Installation Inspection

1. Inspect this motherboard whether there are any damages to components and connectors on the board.
2. If you suspect this motherboard has been damaged, do not connect power to the system. Contact your motherboard vendor about those damages.

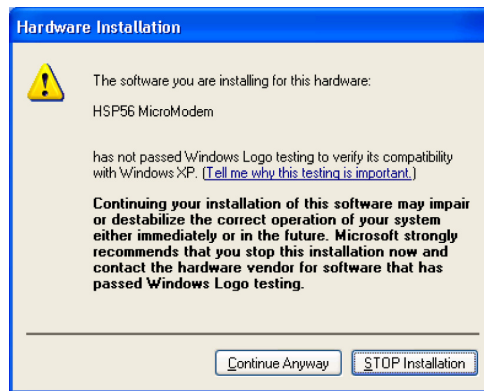
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Notice:

Owing to Microsoft's certifying schedule is various to every supplier, we might have some drivers not certified yet by Microsoft. Therefore, it might happen under Windows XP that a dialogue box (shown as below) pop out warning you this software has not passed Windows Logo testing to verify its compatibility with Windows XP. Please rest assured that our RD department has already tested and verified these drivers. Just click the "Continue Anyway" button and go ahead the installation.



Chapter 1 Introduction

This motherboard has an **LGA775 socket** for latest **Intel Pentium 4/Celeron D/Pentium D** processors with **Hyper-Threading Technology** and Front-Side Bus (FSB) speeds up to **800/533/400 MHz**. Hyper-Threading Technology, designed to take advantage of the multitasking features in Windows XP, gives you the power to do more things at once.

This motherboard integrates the **Intel 865G Northbridge** along with **Intel I/O Controller Hub 5 (ICH5)** that supports the **Serial ATA** interface for high-performance and mainstream desktop PCs; the built-in **USB 2.0** providing higher bandwidth, implementing **Universal Serial Bus Specification Revision 2.0** and is compliant with **UHCI 1.1** and **EHCI 1.0**.

It supports 6-channel **AC'97 Audio Codec** and provides two **IDE Ultra DMA 100/66/33** channel. It has one **AGP 8X slot**, one **CNR** and two 32-bit **PCI** slots. There is a full set of I/O ports including two PS/2 ports for mouse and keyboard, one VGA port, one serial port, one parallel port, one LAN port (optional), three audio jacks for microphone, line-in and line-out, and four back-panel USB 2.0 ports. In addition, onboard USB headers provide extra ports by connecting the extended USB module to the motherboard.

It is a **Micro ATX** motherboard and has power connectors for an ATX power supply.

Key Features

The key features of this motherboard include:

LGA775 Socket Processor Support

- Supports the latest **Intel Pentium 4/Celeron D/Pentium D Series** processors with **Hyper-Threading Technology**
- Supports up to **800/533/400 MHz** Front-Side Bus

Note: **Hyper-Threading** technology enables the operating system into thinking it's hooked up to two processors, allowing two threads to be run in parallel, both on separate 'logical' processors within the same physical processor

Chipset

There are **Intel 865G Northbridge** and **Intel I/O Controller Hub 5 (ICH5)** in the chipsets in accordance with an innovative and scalable architecture with proven reliability and performance.

- Host Interface Support
 - One Intel Pentium 4 processor with 512-KB L2 cache on 0.13 micron process / Pentium 4 processor on 90 nm process
- Hyper-Threading Technology

Motherboard User's Guide

- System Memory Controller Support
 - Dual-channel (6.4 GB/s wide) DDR memory interface
 - Single-channel (3.2 GB/s wide) operation supported
 - Supports DDR266, DDR333, DDR400 DIMM modules
- PCI Bus Interface
 - Supports PCI Revision 2.3 Specification at 33 MHz
- Integrated LAN Controller
 - 10/100 Mbps Faster Ethernet Support
- Integrated Serial ATA Host Controllers
 - Independent DMA operation on two ports
 - Data transfer rates up to 1.5 Gb/s (150 MB/s)
- Integrated IDE Controller
 - Ultra ATA100/66/33, BMIDE and PIO modes
- USB 2.0
 - Includes 4 UHCI Host Controllers, increasing the number of external ports to eight
- AC-Link for Audio and Telephony Codecs
 - Support for 3 AC'97 2.3 codecs–533 MT/s (133 MHz) FSB and 800 MT/s (200 MHz) FSB
 - Supports Hyper-Threading Technology (HT Technology)
 - FSB Dynamic Bus Inversion (DBI)

Memory Support

- Two 184-pin DIMM sockets for DDR SDRAM **DDR400**/333/266 memory modules
- Maximum installed memory is 2 GB

Expansion Slots

- One AGP 8X slot
- Two 32-bit PCI slots
- One CNR slot

Onboard IDE channels

- Two IDE Channels supporting ATA-33, ATA-66, ATA-100
- Supports PIO (Programmable Input/Output) and DMA (Direct Memory Access) modes
- Supports IDE Ultra DMA bus mastering with transfer rates of **100**/66/33 MB/s

Serial ATA

- Two Serial ATA Connectors
- Transfer rate exceeding best ATA (1.5 Gb/s) with scalability to higher rates
- Low pin count for both host and devices

AC'97 Audio Codec

- Compliant with AC'97 2.3 specification

- Front-Out, Surround-Out, MIC-In and LINE-In Jack Sensing
- Three analog line-level stereo inputs with 5-bit volume control: LINE_IN, CD, AUX
- Two analog line-level mono input
- Standard 48-Pin LQFP

Onboard I/O Ports

- Two PS/2 ports for mouse and keyboard
- One serial port
- One parallel port
- One VGA port
- One LAN port (optional)
- Four back-panel USB2.0 ports
- Audio jacks for microphone, line-in and line-out

Fast Ethernet LAN (optional)

- 10 Mb/s and 100 Mb/s operation
- Integrated Fast Ethernet MAC, physical chip, and transceiver onto a single chip
- Supports 10 Mb/s and 100 Mb/s N-way auto-negotiation
- Support ACPI power management
- Full Duplex Flow Control (IEEE 802.3x) and Half/Full duplex capability

USB 2.0

- Compliant with Universal Serial Bus Specification Revision 2.0
- Compliant with Intel's Enhanced Host Controller Interface Specification Revision 1.0
- Compliant with Universal Host Controller Interface Specification Revision 1.1
- PCI multi-function device consists of two **UHCI Host Controller** cores for full-/low-speed signaling and one **EHCI Host Controller** core for high-speed signaling
- Root hub consists 4 downstream facing ports with integrated physical layer transceivers shared by **UHCI** and **EHCI** Host Controller, up to eight functional ports
- Support PCI-Bus Power Management Interface Specification release 1.1
- Legacy support for all downstream facing ports

BIOS Firmware

This motherboard uses AWARD BIOS that enables users to configure many system features including the following:

- Power management
- Wake-up alarms
- CPU parameters and memory timing
- CPU and memory timing

Motherboard User's Guide

The firmware can also be used to set parameters for different processor clock speeds.

Dimensions

- Micro ATX form factor of 244 x 220 mm

Note: Hardware specifications and software items are subject to change without notification.

Package Contents

Your motherboard package ships with the following items:

- The motherboard
- The User's Guide
- One diskette drive ribbon cable (optional)
- One IDE drive ribbon cable
- The Software support CD

Optional Accessories

You can purchase the following optional accessories for this motherboard.

- The Extended USB module
- The CNR v.90 56K Fax/Modem card
- The Serial ATA cable
- The Serial ATA power cable

Note: You can purchase your own optional accessories from the third party, but please contact your local vendor on any issues of the specification and compatibility.