



CERTIFICATE

The TÜV CERT Certification Body
for QM Systems of RWTÜV Systems GmbH

hereby certifies in accordance with TÜV CERT
procedure that

**ELITEGROUP COMPUTER SYSTEMS CO., LTD.
ECS MANUFACTURING (SHENZHEN) CO., LTD.
ELITE TECHNOLOGY (SHENZHEN) CO., LTD.**

2F, No. 240, Sec. 1, Nei Hu Road, Taipei, Taiwan 114
No. 22, Alley 38, Lane 91, Sec. 1, Nei Hu Road, Taipei, Taiwan 114
No. 20 & No. 26, Free Trade Zone, Shatoujiao, Shenzhen City, Guangdong Province, China

has established and applies a quality system for

**Design, Manufacturing and Sales of Mainboards,
Personal Computers, Notebooks and Peripheral Cards**

An audit was performed, Report No. 2.5-1585/2000

Proof has been furnished that the requirements according to
ISO 9001 : 2000 / EN ISO 9001 : 2000 / JIS Q 9001 : 2000 / ANSI/ASQC Q9001 : 2000

are fulfilled. The certificate is valid until 27 January 2007

Certificate Registration No. 04100 2000 1325

The company has been certified since 2000



Essen, 04.03.2004




The TÜV CERT Certification Body for QM Systems
of RWTÜV Systems GmbH



ISO14001 CERTIFICATE

Certificate No.: 061-04-EI-0065-R1-L

We hereby certify that

ECS MANUFACTURING (SHANZHEN) CO., LTD.

by reason of its

Environmental Management System

has been awarded this certificate for
compliance with the standard

ISO14001:1996

The Environmental Management System

applies in the following area:

ECS MANUFACTURING (SHANZHEN) CO., LTD.

located at No. 20 & 26 (except 1F, 2F), Free Trade Zone,

Shatuojiang, Shenzhen City, Guangdong Province, P. R. China.

is engaged in manufacturing of Mother Board and Peripheral Card,
and interrelated managerial activities.

Date of issue: 28th Sept. 2004

Date of expiry: 27th Sept. 2007

Signed by:



SHENZHEN SOUTHERN CERTIFICATION CO., LTD.

Preface

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Version 1.2

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Preface

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

About the Manual

The manual consists of the following:

Chapter 1

Introducing the Motherboard

Describes features of the motherboard.

Go to  page 1

Chapter 2

Installing the Motherboard

Describes installation of motherboard components.

Go to  page 7

Chapter 3

Using BIOS

Provides information on using the BIOS Setup Utility.

Go to  page 25

Chapter 4

Using the Motherboard Software

Describes the motherboard software

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Multi-Language Translation

Chapter 1

Introducing the Motherboard

Introduction

Thank you for choosing this motherboard. It is a high performance, enhanced function motherboard that supports LGA775 Socket for latest Intel Pentium 4/Celeron D Processors.

It incorporates the 915GV Northbridge (NB) and ICH6 Southbridge (SB) chipsets. The Northbridge on this motherboard supports a Front Side Bus (FSB) frequency of 800/533 MHz using a scalable FSB Vcc_CPU. The memory controller supports DDR2 memory DIMM frequencies of 400MHz and 533 MHz. It supports two DDR Sockets with up to maximum memory of 2 GB. DDR Maximum memory bandwidth of 3.2 GB/s in single-channel is supported, or 8.5 GB/s in dual-channel interleaved mode assuming DDR2 533MHz. High resolution graphics via one PCI Express Lite slot, intended for Graphics Interface, are fully compliant to the PCI Express Base Specification revision 1.0a.

The ICH6 Southbridge supports two PCI slots which are PCI 2.3 compliant. In addition, one PCI Express x1 slot is supported, fully compliant to the PCI Express Base Specification, Revision 1.0a. It implements an EHCI compliant interface that provides 480Mb/s bandwidth for eight USB 2.0 ports, integrates AC'97 Audio codec supporting a 6-channel Audio output. One onboard IDE connector supports 2 IDE devices in ATA-100/66 mode. The Southbridge integrates a Serial ATA host controller that is SATA v1.0 compliant, supporting four SATA ports with maximum transfer rate up to 150 MB/s each and LAN controller supporting 10/100Mbit/s ethernet. One CNR (Communication and Networking Riser) slot provides expandability for add-on peripheral cards.

It is equipped with advanced full set of I/O ports in the rear panel, including PS/2 mouse and keyboard connectors, COM1, LPT1, VGA, four USB ports, one optional LAN port, and three audio jacks for microphone, line-in and line out.

Feature

Processor

The motherboard uses a LGA775 type of latest Intel Pentium 4/Celeron D that carries the following features:

- Accommodates latest Intel Pentium 4/Celeron D series processors
- Supports a system bus (FSB) of 800/533 MHz
- Supports “Hyper-Threading” technology CPU

“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

The 915GV Northbridge (NB) and ICH6 Southbridge (SB) chipset are based on an innovative and scalable architecture with proven reliability and performance.

- 915GV (NB)**
- Processor Interface
 - One Intel Pentium 4 processor or Intel Celeron D processor including 775-Land package
 - 533 MT/s (133 MHz) FSB and 800 MT/s (200 MHz) FSB
 - Supports Hyper-Threading Technology (HT Technology)
 - FSB Dynamic Bus Inversion (DBI)
 - System Memory
 - One or two 64-bit wide DDR/DDR2 SDRAM data channels (suppports DDR400 or DDR333, 1 DIMM, 2 Channels only)
 - Bandwidth up to 8.5 GB/s (DDR2 533) in dual-channel Interleaved mode
 - 256-Mb, 512-Mb and 1-Gb DDR/DDR2 technologies
 - Integrated Graphics Device
 - Core Frequency of 333 MHz
 - High-Quality 3D Setup and Render Engine
 - 3D Graphics Rendering Enhancements



915GV chipset can only support 256-Mb, 512-Mb and 1-Gb DDR technologies for x8 and x16 device, NOT support 128-Mb DDR technology. That is, 256 MB Double Side Memory Module & 128 MB Single Side Memory Module are NOT support.

- ICH6 (SB)**
- Enhanced DMA Controller, interrupt controller, and timer functions
 - Compliant with PCI Express Base Specification, Revision 1.0a
 - Compliant with PCI 2.3 specifacaiton
 - Compliant with Serial ATA 1.0a specification
 - Integrated USB 2.0 Host Controller supporting up to eight USB 2.0 ports
 - Integrated LAN controller
 - Compliant with Azalia specification supporting 8 channels of audio outputs
 - Integrated IDE controller supports Ultra ATA100/66/33

Introducing the Motherboard

Memory

- Supports DDR2 533/400 MHz DDR SDRAM DIMMs
- Accommodates two unbuffered DIMMs
- Up to 1 GB per DIMM with maximum memory size up to 2 GB

Expansion Slots

- One PCI Express Lite slot for Graphic Interface
- one PCI Express x1 slot
- Two 32-bit PCI v2.3 compliant slots
- One 40-pin IDE low profile connector that supports two IDE devices
- One floppy disk drive connector
- Four 7-pin SATA connectors

Onboard IDE channels

- One IDE Channel supporting 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/sec

Serial ATA

- Four Serial ATA Connectors
- Transfer rate exceeding best ATA (~150 MB/s) with scalability to higher rates
- Low pin count for both host and devices

AC'97 Audio Codec

- Compliant with AC'97 2.3 specifications
- Meets performance requirements for audio on PC99/2001 systems
- Meets Microsoft WHQL/WLP 2.0 audio requirements
- HRTF 3D Positional Audio and 10 Bands of Software Equalizer

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
- Three Audio jacks for microphone, line-in and line-out

Fast Ethernet LAN (optional)

- Integrates Fast Ethernet MAC, physical chip, and transceiver onto a single chip
- Supports 100Mbps and 10Mbps operation/N-Way Auto negotiation
- Complies with PC99/PC2001 standards and supports ACPI power management
- Supports Full Duplex Flow Control (IEEE 802.3x)

Introducing the Motherboard

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 AMI BIOS that enables users to configure many system features including the following:

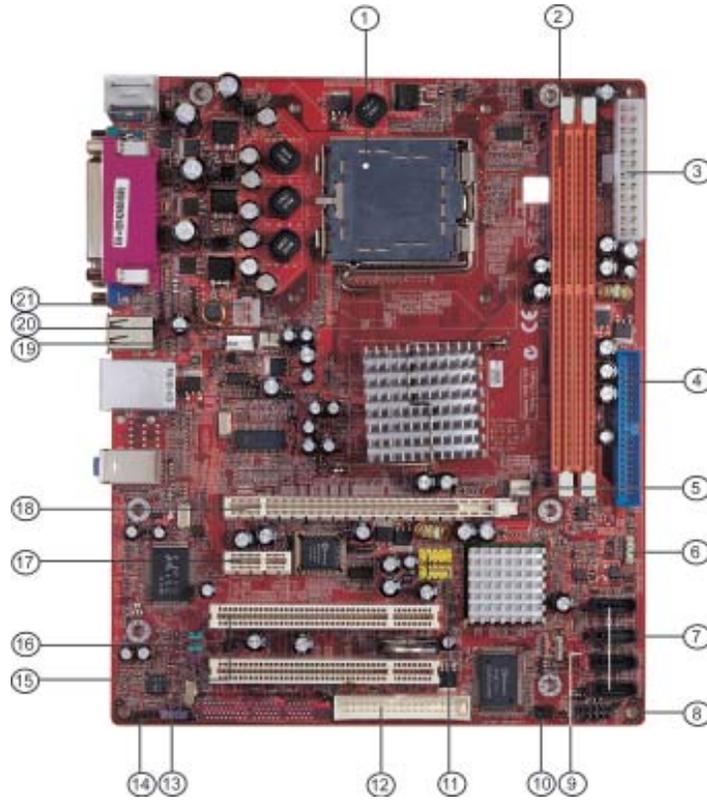
- Power management
- Wake-up alarms
- CPU parameters and memory timing
- CPU and memory timing

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



Some hardware specifications and software items are subject to change with out prior notice.

Motherboard Components



Introducing the Motherboard

Table of Motherboard Components

ITEM	LABEL	COMPONENTS
1	CPU Socket	LGA775 Socket for Intel Pentium 4/ Celeron D CPUs
2	DIMM1/2	240-pin DDR2 SDRAM sockets
3	PWR1	Standard 24-Pin ATX Power connector
4	IDE1	Primary IDE connector
5	CHS_FAN1	Case cooling fan connector
6	SPK1	Speaker header
7	SATA1~4	Serial ATA connectors
8	PANEL1	Front Panel Switch/LED header
9	JP1	Clear CMOS jumper
10	IR1	Infrared header
11	USB3~4	Front Panel USB headers
12	FDC1	Floppy Disk Drive connector
13	SPDIFO1	SPDIF out header
14	CD1	Analog Audio Input header
15	PCI 1-2	32-bit PCI slots
16	AUDIO2	Front Panel Audio header
17	PCI-E2	PCI Express x1 slot
18	PCI-E1	PCI Express Lite slots *
19	CPU_FAN1	CPU cooling fan connector
20	NB_FAN1	Northbridge cooling fan connector
21	PWR2	Standard 4-Pin ATX Power connector

* Please see Page 19 for more details about PCI-E Lite slot.

This concludes Chapter 1. The next chapter explains how to install the motherboard.

Introducing the Motherboard

Chapter 2

Installing the Motherboard

Safety Precautions

- Follow these safety precautions when installing the motherboard
- Wear a grounding strap attached to a grounded device to avoid damage from static electricity
- Discharge static electricity by touching the metal case of a safely grounded object before working on the motherboard
- Leave components in the static-proof bags they came in
- Hold all circuit boards by the edges. Do not bend circuit boards

Choosing a Computer Case

There are many types of computer cases on the market. The motherboard complies with the specifications for the Micro ATX system case. First, some features on the motherboard are implemented by cabling connectors on the motherboard to indicators and switches on the system case. Make sure that your case supports all the features required. Secondly, it supports one floppy diskette drive and one enhanced IDE drive. Make sure that your case has sufficient power and space for all drives that you intend to install.

Most cases have a choice of I/O templates in the rear panel. Make sure that the I/O template in the case matches the I/O ports installed on the rear edge of the motherboard.

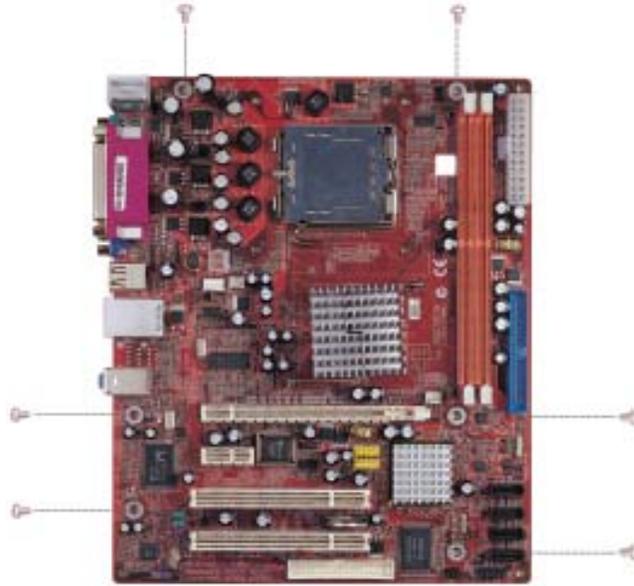
This motherboard carries a Micro ATX form factor of 244 x 200 mm. Choose a case that accommodates this form factor.

Installing the Motherboard in a Case

Refer to the following illustration and instructions for installing the motherboard in a case.

Most system cases have mounting brackets installed in the case, which correspond the holes in the motherboard. Place the motherboard over the mounting brackets and secure the motherboard onto the mounting brackets with screws.

Ensure that your case has an I/O template that supports the I/O ports and expansion slots on your motherboard.



Do not over-tighten the screws as this can stress the motherboard.

Checking Jumper Settings

This section explains how to set jumpers for correct configuration of the motherboard.

Setting Jumpers

Use the motherboard jumpers to set system configuration options. Jumpers with more than one pin are numbered. When setting the jumpers, ensure that the jumper caps are placed on the correct pins.

The illustrations show a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is **SHORT**. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is **OPEN**.



SHORT



OPEN

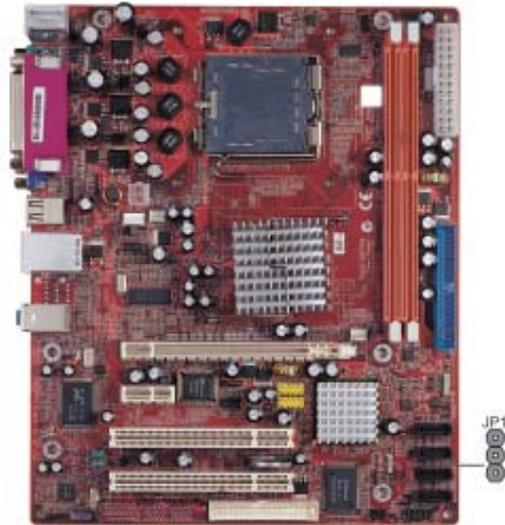
This illustration shows a 3-pin jumper. Pins 1 and 2 are **SHORT**.



Installing the Motherboard

Checking Jumper Settings

The following illustration shows the location of the motherboard jumpers. Pin 1 is labeled.



Jumper Settings

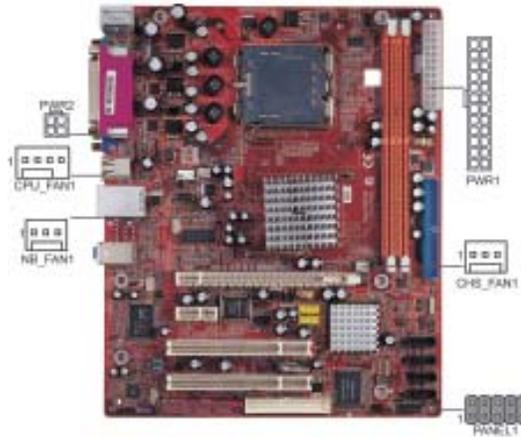
Jumper	Type	Description	Setting (default)	
JP1	3-pin	Clear CMOS	1-2: NORMAL 2-3: CLEAR CMOS Before clearing the CMOS, make sure to turn off the system.	 JP1

Installing the Motherboard

Connecting Case Components

After you have installed the motherboard into a case, you can begin connecting the motherboard components. Refer to the following:

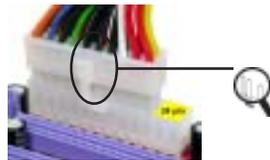
- 1 Connect the CPU cooling fan cable to **CPU_FAN1**.
- 2 Connect the case cooling fan connector to **CHS_FAN1**.
- 3 Connect the case switches and indicator LEDs to the **PANEL1**.
- 4 Connect the standard power supply connector to **PWR1**.
- 5 Connect the auxiliary case power supply connector to **PWR2**.
- 6 Connect the Northbridge cooling fan connector to **NB_FAN1**.



Connecting 20/24-pin power cable

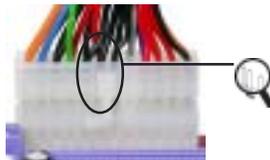


Users please note that the 20-pin and 24-pin power cables can both be connected to the ATX1 connector. With the 20-pin power cable, just align the 20-pin power cable with the pin 1 of the ATX1 connector. However, using 20-pin power cable may cause the system to become unbootable or unstable because of insufficient electricity. A minimum power of 300W is recommended for a fully-configured system



20-pin power cable

Users please note that when installing 20-pin power cable, the latch of power cable falls on the left side of the PWR1 connector latch, just as the picture shows.



24-pin power cable

Users please note that when installing 24-pin power cable, the latches of power cable and the PWR1 match perfectly.

Installing the Motherboard

CPU_FAN1: FAN Power Connector

Pin	Signal Name	Function
1	GND	System Ground
2	+12V	Power +12V
3	Sense	Sensor
4	Control	FAN Speed control



Users please note that the fan connector supports the CPU cooling fan of 1.1A~2.2A (26.4W max) at +12V.

CHS_FAN1: FAN Power Connector

Pin	Signal Name	Function
1	GND	System Ground
2	+12V	Power +12V
3	Sense	Sensor

NB_FAN1: Northbridge FAN Power Connector

Pin	Signal Name	Function
1	GND	System Ground
2	+12V	Power +12V
3	Sense	Sensor

PWR1: ATX 24-pin Power Connector

Pin	Signal Name	Pin	Signal Name
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	Ground	15	GND
4	+5V	16	PS_ON
5	Ground	17	GND
6	+5V	18	GND
7	Ground	19	GND
8	PWRGD	20	-5V
9	+5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

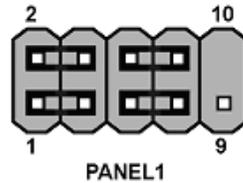
PWR2: ATX 12V Power Connector

Pin	Signal Name
1	GND
2	GND
3	+12V
4	+12V

Installing the Motherboard

Front Panel Header

The front panel header (PANEL1) provides a standard set of switch and LED headers commonly found on ATX or Micro ATX cases. Refer to the table below for information:



Pin	Signal	Function	Pin	Signal	Function
1	HD_LED_P	Hard disk LED+	2	FP PWR/SLP	*MSG LED+
3	HD_LED_N	Hard disk LED-	4	FP PWR/SLP	*MSG LED-
5	RST_SW_N	Reset Switch	6	PWR_SW_P	Power Switch
7	RST_SW_P	Reset Switch	8	PWR_SW_N	Power Switch
9	RSVD_DNU	Reserved	10	Key	No pin

*MSG LED (dual color or single color)

Hard Drive Activity LED

Connecting pins 1 and 3 to a front panel mounted LED provides visual indication that data is being read from or written to the hard drive. For the LED to function properly, an IDE drive should be connected to the onboard IDE interface. The LED will also show activity for devices connected to the SCSI (hard drive activity LED) connector.

Power/Sleep/Message waiting LED

Connecting pins 2 and 4 to a single or dual-color, front panel mounted LED provides power on/off, sleep, and message waiting indication.

Reset Switch

Supporting the reset function requires connecting pin 5 and 7 to a momentary-contact switch that is normally open. When the switch is closed, the board resets and runs POST.

Power Switch

Supporting the power on/off function requires connecting pins 6 and 8 to a momentary-contact switch that is normally open. The switch should maintain contact for at least 50 ms to signal the power supply to switch on or off. The time requirement is due to internal de-bounce circuitry. After receiving a power on/off signal, at least two seconds elapses before the power supply recognizes another on/off signal.

Installing the Motherboard

Installing Hardware

Installing the Processor



Caution: When installing a CPU heatsink and cooling fan make sure that you DO NOT scratch the motherboard or any of the surface-mount resistors with the clip of the cooling fan. If the clip of the cooling fan scrapes across the motherboard, you may cause serious damage to the motherboard or its components.

On most motherboards, there are small surface-mount resistors near the processor socket, which may be damaged if the cooling fan is carelessly installed.

Avoid using cooling fans with sharp edges on the fan casing and the clips. Also, install the cooling fan in a well-lit work area so that you can clearly see the motherboard and processor socket.

Before installing the Processor

This motherboard automatically determines the CPU clock frequency and system bus frequency for the processor. You may be able to change these settings by making changes to jumpers on the motherboard, or changing the settings in the system Setup Utility. We strongly recommend that you do not over-clock processors or other components to run faster than their rated speed.



Warning: Over-clocking components can adversely affect the reliability of the system and introduce errors into your system. Over-clocking can permanently damage the motherboard by generating excess heat in components that are run beyond the rated limits.

This motherboard has a LGA775 socket. When choosing a processor, consider the performance requirements of the system. Performance is based on the processor design, the clock speed and system bus frequency of the processor, and the quantity of internal cache memory and external cache memory.

Installing the Motherboard

CPU Installation Procedure

The following illustration shows CPU installation components.

- A. Unload the cap
 - Use thumb & forefinger to hold the lifting tab of the cap.
 - Lift the cap up and remove the cap completely from the socket.
- B. Open the load plate
 - Use thumb & forefinger to hold the hook of the lever, pushing down and pulling aside unlock it.
 - Lift up the lever.
 - Use thumb to open the load plate. Be careful not to touch the contacts.
- C. Install the CPU on the socket
 - Orientate CPU package to the socket. Make sure you match triangle marker to pin 1 location.
- D. Close the load plate
 - Slightly push down the load plate onto the tongue side, and hook the lever.
 - CPU is locked completely.
- E. Apply thermal grease on top of the CPU.
- F. Fasten the cooling fan supporting base onto the CPU socket on the motherboard.
- G. Make sure the CPU fan is plugged to the CPU fan connector. Please refer to the CPU cooling fan user's manual for more detail installation procedure.



1.To achieve better airflow rates and heat dissipation, we suggest that you use a high quality fan with 3800 rpm at least. CPU fan and heatsink installation procedures may vary with the type of CPU fan/heatsink supplied. The form and size of fan/heatsink may also vary.

2.The fan connector supports the CPU cooling fan of 1.1A~2.2A (26.4W max.) at +12V.

3.DO NOT remove the CPU cap from the socket before installing a CPU.

Installing the Motherboard

Installing Memory Modules

This motherboard accommodates two memory modules, which are two 240-pin 1.8V DIMM1-2 sockets (Dual Inline Memory Module) for unbuffered DDR2 533/DDR400 memory modules (Double Data Rate SDRAM). DDR SDRAM is a type of SDRAM that supports data transfers on both edges of each clock cycle (the rising and falling edges), effectively doubling the memory chip's data throughput. You must install at least one module in any of the four slots. Each module can be installed with 256 MB to 1 GB of memory; total memory capacity is 2 GB.



Do not remove any memory module from its antistatic packaging until you are ready to install it on the motherboard. Handle the modules only by their edges. Do not touch the components or metal parts. Always wear a grounding strap when you handle the modules.

Installation Procedure

Refer to the following to install the memory modules.

- 1 This motherboard supports unbuffered DDR SDRAM .
- 2 Push the latches on each side of the DIMM slot down.
- 3 Align the memory module with the slot. The DIMM slots are keyed with notches and the DIMMs are keyed with cutouts so that they can only be installed correctly.
- 4 Check that the cutouts on the DIMM module edge connector match the notches in the DIMM slot.
- 5 Install the DIMM module into the slot and press it firmly down until it seats correctly. The slot latches are levered upwards and latch on to the edges of the DIMM.
- 6 Install any remaining DIMM modules.



Installing the Motherboard

Installing a Hard Dish Drive/CD-ROM/SATA Hard Drive

This section describes how to install IDE devices such as a hard disk drive and a CD-ROM drive.

About IDE Devices

Your motherboard has one IDE channel interface. An IDE ribbon cable supporting two IDE devices is bundled with the motherboard.



You must orient the cable connector so that the pin1 (color) edge of the cable corresponds to the pin 1 of the I/O port connector.

IDE1: IDE Connector

This motherboard supports four high data transfer SATA ports with each runs up to 150 MB/s. To get better system performance, we recommend users connect the CD-ROM to the IDE channel, and set up the hard drives on the SATA ports.



IDE devices enclose jumpers or switches used to set the IDE device as MASTER or SLAVE. Refer to the IDE device user's manual. Installing two IDE devices on one cable, ensure that one device is set to MASTER and the other device is set to SLAVE. The documentation of your IDE device explains how to do this.

About SATA Connectors

Your motherboard features four SATA connectors supporting a total of four drives. SATA , or Serial ATA (Advanced Technology Attachment) is the standard interface for the IDE hard drives which are currently used in most PCs. These connectors are well designed and will only fit in one orientation. Locate the SATA connectors on the motherboard and follow the illustration below to install the SATA hard drives.

Installing Serial ATA Hard Drives

To install the Serial ATA (SATA) hard drives, use the SATA cable that supports the Serial ATA protocol. This SATA cable comes with an SATA power cable. You can connect either end of the SATA cable to the SATA hard drive or the connector on the motherboard.



SATA cable (optional)



SATA power cable (optional)

Installing the Motherboard

Refer to the illustration below for proper installation:

- 1 Attach either cable end to the connector on the motherboard.
- 2 Attach the other cable end to the SATA hard drive.
- 3 Attach the SATA power cable to the SATA hard drive and connect the other end to the power supply.



This motherboard does not support the “Hot-Plug” function.

Installing a Floppy Diskette Drive

The motherboard has a floppy diskette drive (FDD) interface and ships with a diskette drive ribbon cable that supports one or two floppy diskette drives. You can install a 5.25-inch drive and a 3.5-inch drive with various capacities. The floppy diskette drive cable has one type of connector for a 5.25-inch drive and another type of connector for a 3.5-inch drive.



You must orient the cable connector so that the pin 1 (color) edge of the cable corresponds to the pin 1 of the I/O port connector.

FDC1: Floppy Disk Connector

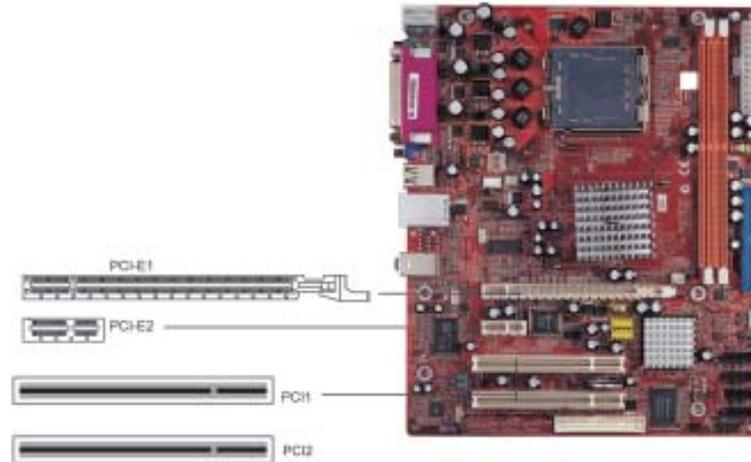
This connector supports the provided floppy drive ribbon cable. After connecting the single end to the onboard floppy connector, connect the remaining plugs on the other end to the floppy drives correspondingly.



Installing the Motherboard

Installing Add-on Cards

The slots on this motherboard are designed to hold expansion cards and connect them to the system bus. Expansion slots are a means of adding or enhancing the motherboard's features and capabilities. With these efficient facilities, you can increase the motherboard's capabilities by adding hardware that performs tasks that are not part of the basic system.



PCI Express Lite Slot

The PCI Express Lite (PCI-E1) slot is used to install an external PCI Express graphics card.

PCI Express x 1 Slot

The PCI Express x1 (PCI-E2) slot is used to install an external PCI Express graphics card.

PCI Slots

This motherboard is equipped with two standard PCI slots. PCI stands for Peripheral Component Interconnect and is a bus standard for expansion cards. The PCI slots on this board are PCI v2.3 compliant.



Before installing an add-on card, check the documentation for the card carefully. If the card is not Plug and Play, you may have to manually configure the card before installation.

Installing the Motherboard

PCI Express Graphics Card Support List for PCI-Express Lite Slot:

VENDER	BUS	CHIPSET	MANUFACTURE
ATI	16X	Radeon X600XT	GIGABYTE GV-RX60XT 128V
		Radeon X700Pro	ELSA FALCONX X70PRO 256B3
		Radeon X800XT	MSI RX800XT-VDT256E
		Radeon X850XT PE	ASUS EAX850XTP/2DHTV/256M/A
nVIDIA	16X	GeForce6200	GIGABYTE GV-NX62128D
		GeForce6200TC	GIGABYTE GV-NX62TC256D
		GeForce6600	WINFAST PX6600TD
		GeForce6600GT	GIGABYTE GV-NX66T128D
S3	16X	GammaChrome S18	S3Graphics VT8359C

Note 1: We recommend you should use our tested PCI Express graphics cards, and you can visit our website for the updated PCI Express graphics card support list : <http://www.ecs.com/support/FAQ> . Please be noted we DO NOT guarantee any PCI Express graphics cards which are not in our support list.

Note 2: To install the system with an add-on PCI Express graphics card, you must make sure to install the driver of add-on PCI Express graphics card before you install the onboard VGA driver. If the onboard VGA driver has already been installed before you install the add-on PCI Express graphics card, the system will set the onboard VGA as the primary graphics adapter automatically. In this situation, if you want to install the add-on PCI Express graphics card, you need to remove the onboard VGA driver first, and then install the add-on PCI Express graphics card and its driver.

Note 3: To perform a normal installation of PCI Express graphics card, you need to install the driver under Windows XP with the Service Pack 1 (SP1).

Follow these instructions to install an add-on card:

- 1 Remove a blanking plate from the system case corresponding to the slot you are going to use.
- 2 Install the edge connector of the add-on card into the expansion slot. Ensure that the edge connector is correctly seated in the slot.
- 3 Secure the metal bracket of the card to the system case with a screw.



For some add-on cards, for example graphics adapters and network adapters, you have to install drivers and software before you can begin using the add-on card.

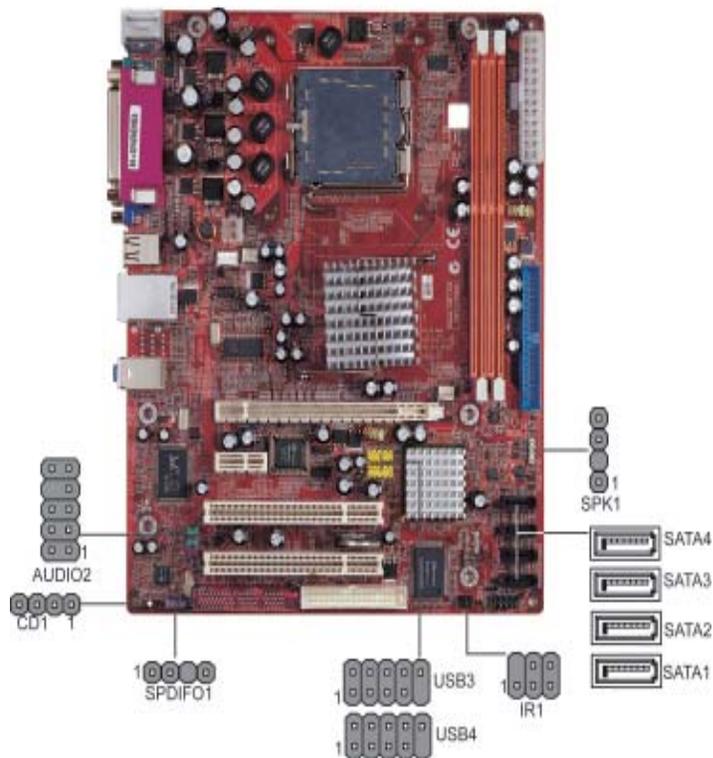
Installing the Motherboard

Dual Monitor

In order to enable “Dual Monitor” Function, users must have “**Two Monitors**”, “**Two Graphics Devices**” (one is for PCI Express graphics card; the other one is for onboard VGA) and Windows 2000 or Windows XP that supports the Dual Monitor Function.

Connecting Optional Devices

Refer to the following for information on connecting the motherboard’s optional devices:



SPK1: Speaker Header

Connect the cable from the PC speaker to the SPK1 header on the motherboard.

Pin	Signal Name
1	SPKR
2	NC
3	SPKR
4	+5V

Installing the Motherboard

AUDIO2: Front Panel Audio header

This header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal Name
1	AUD_MIC
2	AUD_GND
3	AUD_MIC_BIAS
4	AUD_VCC
5	AUD_FPOUT_R
6	AUD_RET_R
7	HP_ON
8	KEY
9	AUD_FPOUT_L
10	AUD_RET_L

USB3/USB4: Front Panel USB headers

The motherboard has four USB ports installed on the rear edge I/O port array. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connector to connect the front-mounted ports to the motherboard.

1	VERG_FP_USBPWR0
2	VERG_FP_USBPWR0
3	USB_FP_P0 (-)
4	USB_FP_P1 (-)
5	USB_FP_P0 (+)
6	USB_FP_P1 (+)
7	GROUND
8	GROUND
9	KEY
10	USB_FP_OC0



Please make sure that the USB cable has the same pin assignment as indicated above. A different pin assignment may cause damage or system hand-up.

CD1: Primary CD-in connector

Pin	Signal Name
1	CDINL
2	GND
3	GND
4	CDINR

Installing the Motherboard

SATA1/2/3/4: Serial ATA connectors

These connectors are used to support the new Serial ATA devices for the highest data transfer rates (150 MB/s), simpler disk drive cabling and easier PC assembly. It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and software compatibility with Parallel ATA.

Pin	Signal Name	Pin	Signal Name
1	GROUND	2	TX+
3	TX-	4	GROUND
5	RX-	6	RX+
7	GROUND	-	-

SPDIF01: SPDIF out header

This is an optional header that provides an S/PDIF (Sony/Philips Digital Interface) output to digital multimedia device through optical fiber or coaxial connector.

Pin	Signal Name	Function
1	SPDIF OUT	SPDIF digital output
2	+5VA	5V analog power
3	Key	No pin
4	GND	Ground

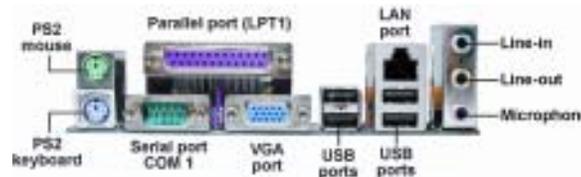
IR1: Infrared header

This motherboard supports an Infrared (IRDA) data port. Infrared ports allow the wireless exchange of information between your computer and similarly equipped devices such as printers, laptops, Personal Digital Assistants (PDAs), and other computers.

Pin	Signal Name
1	NC
2	KEY
3	+5V
4	GND
5	IRTX
6	IRRX

Connecting I/O Devices

The backplane of the motherboard has the following I/O ports:



- PS2 Mouse** Use the upper PS/2 port to connect a PS/2 pointing device.
- PS2 Keyboard** Use the lower PS/2 port to connect a PS/2 keyboard.
- Parallel Port (LPT1)** Use LPT1 to connect printers or other parallel communications devices.
- Serial Port (COM1)** Use the COM port to connect serial devices such as mice or fax/modems. COM1 is identified by the system as COM1/3.
- VGA Port** Connect your monitor to the VGA port.
- LAN Port (optional)** Connect an RJ-45 jack to the LAN port to connect your computer to the Network.
- USB Ports** Use the USB ports to connect USB devices.
- Audio Ports** Use the three audio ports to connect audio devices. The first jack is for stereo line-in signal. The second jack is for stereo line-out signal. The third jack is for microphone.

This concludes Chapter 2. The next chapter covers the BIOS.

Installing the Motherboard

Memo

Installing the Motherboard

Chapter 3

Using BIOS

About the Setup Utility

The computer uses the latest American Megatrends BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL to enter SETUP

Press the delete key to access the BIOS Setup Utility:

CMOS SETUP UTILITY – Copyright (C) 1985-2004, American Megatrends, Inc	
<ul style="list-style-type: none"> ■ Standard CMOS Setup ■ Advanced Setup ■ Features Setup ■ Power Management Setup ■ PCI / Plug and Play Setup ■ BIOS Security Features 	<ul style="list-style-type: none"> ■ CPU PnP Setup ■ Hardware Monitor Load Best Performance Settings Load Optimal Defaults Save Changes and Exit Discard Changes and Exit
← →: Move +/-: Value Enter: Select F1: General Help Esc: Exit F8: Best Performance Settings F9: Optimized Settings F10: Save	
Standards CMOS setup for changing time, date, hard disk type, etc. V02.56 (C) 1985-2004, American Megatrends, Inc.	

BIOS Navigation Keys

The BIOS navigation keys are listed below:

KEY	FUNCTION
ESC	Exits the current menu
← ↑ ↓ →	Scrolls through the items on a menu
+/-	Modifies the selected field's values
F1	Displays a screen that describes all key functions
F8	Loads an optimized setting for better performance
F9	Loads Failsafe Defaults
F10	Saves the current configuration and exits setup

Using BIOS

Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

- 1 If your motherboard has a BIOS protection jumper, change the setting to allow BIOS flashing.
- 2 If your motherboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.)
- 3 Create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)
- 4 Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the system diskette you created in Step 3.
- 5 Turn off your computer and insert the system diskette in your computer's diskette drive. (You might need to run the Setup Utility and change the boot priority items on the Boot Configuration Features, to force your computer to boot from the floppy diskette drive first.)
- 6 At the A:\ prompt, type the Flash Utility program name and the file name of the new BIOS, then press <Enter>, example:AMINF340.EXE 0470706.ROM
- 7 When the installation is complete, remove the floppy diskette from the diskette drive and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten. The computer will restart automatically.

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ►) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle ►.

Using BIOS

Standard CMOS Setup

This option displays basic information about your system.

CMOS SETUP UTILITY – Copyright (C) 1985-2004, American Megatrends, Inc. Standard CMOS Setup		
System Time	17:09:00	Help Item
System Date	Mon 10/19/2005	
Primary IDE Master	Hard Disk	User [Enter], [TAB] or [SHIFT-TAB] to select a field. Use [+] or [-] to configure system time.
Primary IDE Slave	Not Detected	
Secondary IDE Master	CD/DVD ROM	
Secondary IDE Slave	Not Detected	
Third IDE Master	Not Detected	
Third IDE Slave	Not Detected	
Floppy A	1.44 MB 3 1/2"	
← →: Move +/-: Value Enter: Select F1: General Help Esc: Exit F8: Best Performance Settings F9: Optimized Settings F10: Save		

System Date & System Time

These items set up system date and time.

Primary IDE Master/Primary IDE Slave/Secondary IDE Master/Secondary IDE Slave/Third IDE Master/Third IDE Slave

Your computer has one IDE channel and each channel can be installed with one or two devices (Master and Slave). In addition, this motherboard supports four SATA channels and each channel allows one SATA device to be installed. Use these items to configure each device on the IDE channel.

Floppy A

These items set up size and capacity of the floppy diskette drive installed in the system.

Press <Esc> to return to the main menu setting page.

ACPI Aware O/S (Yes)

This item supports ACPI (Advanced Configuration and Power Management Interface). Use this item to enable or disable the ACPI feature.

Power Management (Enabled)

Use this item to enable or disable a power management scheme. If you enable power management, you can use this item below to set the power management operation. Both APM and ACPI are supported.

Suspend Mode (S1 (POS))

Use this item to define how your system suspends. In the default, S1(POS), the suspend mode is equivalent to a software power down. If you select S3 (STR), the suspend mode is a suspend to RAM, i.e., the system shuts down with the exception of a refresh current to the system memory.

Suspend Time Out (Disabled)

This item sets up the timeout for Suspend mode in minutes. If the time selected passes without any system activity, the computer will enter power-saving Suspend mode.

LAN/Ring Power On (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the Modem/Ring, or traffic on the network adapter. You must use an ATX power supply in order to use this feature.

Resume on RTC Alarm (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.

Resume From USB Device (Enabled)

If you enable this item, the system can automatically resume by using the USB device.

Keyboard Power On (Disabled)

If you enable this item, the system can automatically resume by pressing any keys, power key, or typing in the password on the keyboard. You must use an ATX power supply in order to use this feature.

Password (Press Enter)

When Keyboard Power On is set to "Password", this item is available and users can enter the password.

Press <Esc> to return to the main menu setting page.

PCI / Plug and Play Setup Page

This page sets up some parameters for devices installed on the PCI bus and those utilizing the system plug and play capability.

CMOS SETUP UTILITY – Copyright (C) 1985-2004, American Megatrends, Inc. PCI / Plug and Play Setup		
Plug & Play Aware O/S	Yes	Help Item No: lets the BIOS configure all the devices in the system. YES: lets the operating system configure Plug and Play (PnP) devices not required for boot if your system has a Plug and Play operating system.
Share Memory Size	8 MB	
Primary Graphics Adapter	PCI-E Pro	
Dual Monitor Support	Disabled	
Allocate IRQ to PCI VGA	Yes	
PCI IDE BusMaster	Enabled	
⬅️ ➡️ ↻ Move +/- Value Enter: Select F1: General Help Esc: Exit F8: Best Performance Settings F9: Optimized Settings F10: Save		

Plug & Play Aware O/S (Yes)

This item selects which, the BIOS or the operating system, will configure all the devices in the system. If set NO, the BIOS configures the system; set YES, the operating system configures Plug and Play devices.

Share Memory Size (8 MB)

This item lets you allocate a portion of the main memory for the onboard VGA display application with these options of Disabled, 1 MB and 8 MB.

Primary Graphics Adapter (PCI-E Pro)

This item indicates if the primary graphics adapter uses the Onboard VGA, PCI-E Pro, or PCI VGA.

Dual Monitor Support (Disabled)

This item is a switch to turn on/off the Dual Monitor function. If it is enabled, please connect the system to two monitors for performing the Dual Monitor function; if disabled, this function will be turned off.

Allocate IRQ to PCI VGA (Yes)

If this item is enabled, an IRQ will be assigned to the PCI VGA graphics system. You set this value to No to free up an IRQ.

PCI IDE BusMaster (Enabled)

This item enables or disables the DMA under DOS mode. We recommend you to leave this item at the default value.

Press <Esc> to return to the main menu setting page.

BIOS Security Features Setup Page

This page helps you install or change a password.

CMOS SETUP UTILITY – Copyright (C) 1985-2004, American Megatrends, Inc. BIOS Security Features Setup	
Security Settings	Help Item
Supervisor Password : Not Installed Change Supervisor Password Press Enter	Install or Change the password.
⬅️➡️: Move +/-: Value Enter: Select F1: General Help Esc: Exit F8: Best Performance Settings F9: Optimized Settings F10: Save	

Supervisor Password

This item indicates whether a supervisor password has been set. If the password has been installed, *Installed* displays. If not, *Not Installed* displays.

Change Supervisor Password (Press Enter)

You can select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Press <Esc> to return to the main menu setting page.

CPU PnP Setup Page

This page helps you manually configure the mainboard for the CPU. The system will automatically detect the type of installed CPU and make the appropriate adjustments to the items on this page.

CMOS SETUP UTILITY – Copyright (C) 1985-2004, American Megatrends, Inc. CPU PnP Setup	
Manufacturer:	Help Item
Intel	Auto
DRAM Frequency	200MHz
CPU Frequency	Disabled
CPU Over-clocking Func.	Auto
	400MHz
	533 MHz
⬅️➡️: Move +/-: Value Enter: Select F1: General Help Esc: Exit F8: Best Performance Settings F9: Optimized Settings F10: Save	

Manufacturer(Intel)

These items show the brand of the CPU installed in your system.

DRAM Frequency (Auto)

This item shows the frequency of the DRAM in your system.

CPU Frequency (200MHz)

This item shows the frequency of the CPU installed in your system.

Using BIOS

CPU Over-clocking Func. (Disabled)

This item decides the CPU over-clocking function installed in your system. If the over-clocking fails, please turn off the system power. And then, hold the PageUp key (similar to the Clear CMOS function) and turn on the power, the BIOS will recover the safe default.

Press <Esc> to return to the main menu setting page.

Hardware Monitor Page

This page sets up some parameters for the hardware monitoring function of this motherboard.

CMOS SETUP UTILITY – Copyright (C) 1985-2004, American Megatrends, Inc. Hardware Monitor Setup	
-- System Hardware Monitor --	Help Item
Vcore	: 1.363 V
Vlidd	: 1.677 V
VCC3V	: 3.241 V
Vdimm	: 1.806 V
CPU FAN Speed	: 2463 RPM
NB FAN Speed	: 5192 RPM
Chassis FAN Speed	: 0 RPM
CPU Temperature	: 47°C/116°F
System Temperature	: 45°C/113°F
CPU SMART FAN CONTROL	: 45°C/113°F
SMART FAN Minimum Speed	: SILENT
Disabled 45°C/113°F 55°C/131°F 65°C/149°F	
⬅️➡️: Move +/-: Value Enter: Select F1: General Help Esc: Exit F8: Best Performance Settings F9: Optimized Settings F10: Save	

FANS & Voltage Measurements

These items indicate cooling fan speeds in RPM and the various system voltage measurements.

CPU/System Temperature

These items display CPU and system temperature measurement.

CPU SMART FAN CONTROL

Use this item to set the CPU SMART FAN control. When the system temperature is below 45°C, the SMART FAN is running in SILENT mode, while above 45°C, the SMART FAN will be running at full speed mode.

SMART FAN Minimum Speed (SILENT)

This item enables users to select the minimum speed of the SMART FAN when the system temperature is below the value set at the above item. Here users have three modes to choose from, SILENT, LOW and MIDDLE.

Press <Esc> to return to the main menu setting page.

Load Best Performance Settings

If you select this item and press <Enter> a dialog box appears. If you select [OK], and then press <Enter>, the Setup Utility loads a set of best performance default values. These default values are quite demanding and **your system might malfunction or be unstable** if you are using slower memory chips or other low-performance components.

Load Optimal Defaults

If you select this item and press <Enter> a dialog box appears. If you select [OK], and then press <Enter>, the Setup Utility loads a set of fail-safe default values. These default values are not very demanding and they should allow your system to function with most kinds of hardware and memory chips.

Save Changes and Exit

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility configuration. When the Save Changes and Exit dialog box appears, select [OK] to save and exit, or [Cancel] to return to the main menu.

Discard Changes and Exit

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Discard Changes and Exit dialog box appears, select [OK] to discard changes and exit, or [Cancel] to return to the main menu.



If you have made settings that you do not want to save, use the “Discard Changes and Exit” item and press <OK> to discard any changes you have made.

Chapter 4

Using the Motherboard Software

About the Software CD-ROM

The support software CD-ROM that is included in the motherboard package contains all the drivers and utility programs needed to properly run the bundled products. Below you can find a brief description of each software program, and the location for your motherboard version. More information on some programs is available in a README file, located in the same directory as the software.



Never try to install all software from folder that is not specified for use with your motherboard.

Before installing any software, always inspect the folder for files named README.TXT, INSTALL.TXT, or something similar. These files may contain important information that is not included in this manual.

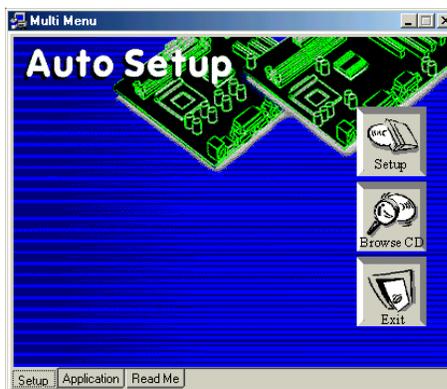
Auto-installing under Windows 2000/XP

The Auto-install CD-ROM makes it easy for you to install the drivers and software for your motherboard.



If the Auto-install CD-ROM does not work on your system, you can still install drivers through the file manager for your OS (for example, Windows Explorer). Refer to the Utility Folder Installation Notes later in this chapter.

The support software CD-ROM disc loads automatically under Windows 2000/XP. When you insert the CD-ROM disc in the CD-ROM drive, the autorun feature will automatically bring up the install screen. The screen has three buttons on it, Setup, Browse CD and Exit.



If the opening screen does not appear; double-click the file "setup.exe" in the root directory.

Using the Motherboard Software

Setup Tab

Setup	Click the Setup button to run the software installation program. Select from the menu which software you want to install.
Browse CD	<p>The Browse CD button is the standard Windows command that allows you to open Windows Explorer and show the contents of the support CD.</p> <p>Before installing the software from Windows Explorer, look for a file named README.TXT, INSTALL.TXT or something similar. This file may contain important information to help you install the software correctly.</p> <p>Some software is installed in separate folders for different operating systems, such as DOS, WIN NT, or WIN98/95. Always go to the correct folder for the kind of OS you are using.</p> <p>In install the software, execute a file named SETUP.EXE or INSTALL.EXE by double-clicking the file and then following the instructions on the screen.</p>
Exit	The EXIT button closes the Auto Setup window.

Application Tab

Lists the software utilities that are available on the CD.

Read Me Tab

Displays the path for all software and drivers available on the CD.

Running Setup

Follow these instructions to install device drivers and software for the motherboard:

1. Click **Setup**. The installation program begins:

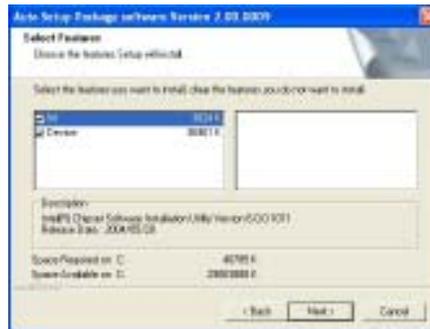


The following screens are examples only. The screens and driver lists will be different according to the motherboard you are installing.

The motherboard identification is located in the upper left-hand corner.

Using the Motherboard Software

2. Click **Next**. The following screen appears:



3. Check the box next to the items you want to install. The default options are recommended.
4. Click **Next** run the Installation Wizard. An item installation screen appears:



5. Follow the instructions on the screen to install the items.

Drivers and software are automatically installed in sequence. Follow the onscreen instructions, confirm commands and allow the computer to restart a few times to complete the installation.

Using the Motherboard Software

Manual Installation

Insert the CD in the CD-ROM drive and locate the PATH.DOC file in the root directory. This file contains the information needed to locate the drivers for your motherboard.

Look for the chipset and motherboard model; then browse to the directory and path to begin installing the drivers. Most drivers have a setup program (SETUP.EXE) that automatically detects your operating system before installation. Other drivers have the setup program located in the operating system subfolder.

If the driver you want to install does not have a setup program, browse to the operating system subfolder and locate the readme text file (README.TXT or README.DOC) for information on installing the driver or software for your operating system.

Utility Software Reference

All the utility software available from this page is Windows compliant. They are provided only for the convenience of the customer. The following software is furnished under license and may only be used or copied in accordance with the terms of the license.



These software(s) are subject to change at anytime without prior notice. Please refer to the support CD for available software.

AMI/AWARD Flash Utility

This utility lets you erase the system BIOS stored on a Flash Memory chip on the motherboard, and lets you copy an updated version of the BIOS to the chip. Proceed with caution when using this program. If you erase the current BIOS and fail to write a new BIOS, or write a new BIOS that is incorrect, your system will malfunction. Refer to Chapter 3, Using BIOS for more information.

WinFlash Utility

The Award WinFlash utility is a Windows version of the DOS Award BIOS flash writer utility. The utility enables you to flash the system BIOS stored on a Flash Memory chip on the motherboard while in a Windows environment. This utility is currently available for WINXP\ME\2000\98SE. To install the WinFlash utility, run WINFLASH.EXE from the following directory: \UTILITY\WINFLASH 1.51

This concludes Chapter 4.

Caractéristiques

Processeur

La carte mère utilise un type LGA775 de Pentium 4/Celeron D présentant les fonctionnalités suivantes :

- Reçoit des processeurs de la série Intel Pentium 4/Celeron D
- Support un bus système (FSB) de 800/533 MHz
- Supporte le CPU de technologie "Hyper-Threading"

La technologie "Hyper-Threading" permet au système d'exploitation de penser qu'il est connecté à deux processeurs, permettant d'exécuter deux threads en parallèle, à la fois sur des processeurs 'logiques' dans le même processeur physique.

Chipset

Le chipset 915GV Northbridge (NB) Chipset et ICH6 Southbridge (SB) se base sur une architecture innovante et évolutive avec des performances et une fiabilité éprouvées.

915GV(NB)

- Interface du processeur
 - Un processeur Intel Pentium 4 ou processeur Intel Celeron D comprenant le package 775-Land
 - 533 MT/s (133 MHz) FSB et 800 MT/s (200 MHz) FSB
 - Prend en charge la technologie Hyper-Threading (Technologie HT)
 - Inversion de Bus Dynamique FSB (DBI)
- Mémoire système
 - Un ou deux canaux de données SDRAM DDR/DDR2 de 64 bits (prend en charge la DDR400 ou DDR333, 1 DIMM, 2 canaux seulement)
 - Bande passant jusqu'à 8,5 Go/s (DDR2 533) en mode en trelacé double canal
 - Technologies DDR/DDR2 256-Mb, 512-Mb et 1-Gb
- Périphérique graphique intégré
 - Fréquence du noyau de 333 MHz
 - Configuration 3D de haute performance et Moteur de Rendu
 - Améliorations de rendu graphique 3D



Le chipset 915GV peut seulement prendre en charge les technologies DDR 256-Mb, 512-Mb et 1-Gb pour x8 et x16 périphériques, NE prend PAS en charge la technologie DDR 128-Mb. C'est à dire que le Module Mémoire Double Face de 256 Mo & le Module Mémoire Simple Face de 128 Mo NE sont PAS pris en charge.

ICH6 (SB)

- PCI Express: 4 ports racine PCI Express et entièrement conforme PCI Express 1.0a
- Interface de Bus PCI : Prend en charge les spécifications PCI Rev 2.3 à 33 MHz
- Contrôleur d'Hôte ATA Série intégré : Quatre ports et vitesse de transfert allant jusqu'à 1,5 Gb/s (150 Mo/s)
- Contrôleur IDE intégré
 - Synchronisation indépendante de deux lecteurs maximum
 - Ultra ATA/100/66/33, modes BMIDE et PIO
- Conforme à la spécification Azalia prenant en charge 8 Canaux de sorties audio
- USB2.0
 - Comprend quatre contrôleurs d'hôte UHCI, prenant en charge huit ports externes
 - Comprend un contrôleur d'hôte EHCI prenant en charge les huit ports

- Contrôleur LAN intégré
 - Conforme WfM 2.0 et IEEE 802.3
 - Prise en charge Ethernet 10/100 Mb/s

Mémoire

- Prend en charge les DDR DIMM SDRAM DDR2 533/400 MHz
- Reçoit deux DIMM sans tampon
- Jusqu'à 1 Go par DIMM avec une taille de mémoire maximum de 2 Go

Logements d'Extension

- Un logement PCI Express Lite pour Interface Graphique
- Un logement PCI Express x1
- Deux emplacements PCI v2.3 bits
- Un en-têtes demi-hauteur IDE de 40 broches supportant deux canaux IDE
- Une interface lecteur de disquettes
- Quatre connecteurs SATA à 7 broches

Canaux IDE internes

- Un canal IDE prenant en charge ATA-66, ATA-100
- Prend en Charge les modes PIO (Entrée/Sortie Programmable) et DMA (Accès Direct à la Mémoire)
- Supporte maîtrise de bus Ultra DMA IDE avec vitesse de transfert de **100/66/33** Mo/sec

ATA Série

- Quatre ATA Série connecteurs
- Vitesse de transfert supérieure au meilleur ATA (~150 Mo/s) avec extensibilité aux vitesses supérieures
- Comptage de broche faible pour l'hôte et les périphériques

AC'97 Audio CODEC

- Conforme aux spécifications AC'97 Rev2.3
- Répond aux exigences de performances pour l'audio sur les systèmes PC99/2001
- Conforme aux exigences audio de Microsoft WHQL/WLP 2.0
- Audio Positionnelle 3D HRTF et 10 Bandes d'équaliseur de logiciel

Ports E/S Internes

- Deux ports PS/2 pour souris et clavier
- Un port série
- Un port parallèle
- Un port VGA
- Un port LAN (optionnel)
- Quatre ports USB2.0 de panneau arrière
- Prises audio pour microphone, ligne d'entrée et ligne de sortie

Fast Ethernet LAN (optionnel)

- Fast Ethernet MAC intégré, puce physique, et émetteur-récepteur sur une seule puce
- Supporte l'auto-négociation N-way en 10Mbps et 100Mbps
- Conforme aux standards PC99/PC2001 et supporte la gestion d'alimentation ACPI
- Prend en charge le Contrôle de Flux Full Duplex (IEEE 802.3x)

Microprogramme BIOS

La carte mère utilise AMI BIOS qui permet à l'utilisateur de configurer bon nombre de fonctions du système, dont :

- Gestion d'alimentation
- Alertes de réveil
- Paramètres de CPU
- Synchronisation de CPU et de mémoire

Le micro-programme peut également être utilisé pour définir les paramètres pour différentes vitesses d'horloge de processeur.



Certaines spécifications matérielles et certains éléments logiciels sont susceptibles de modification sans préavis.

Features

Prozessor

Dieses Motherboard verwendet einen LGA775 Typ Intel Pentium 4/Celeron D mit den folgenden Eigenschaften:

- Nimmt Prozessoren der Serie Intel Pentium 4/Celeron D auf
- Unterstützt einen Systembus (FSB) mit 800/533 MHz.
- Unterstützt CPU mit "Hyper-Threading"-Technologie.

"Hyper-Threading"-Technologie läßt das Betriebssystem glauben, es sei an zwei Prozessoren angeschlossen, was zwei parallele Threads auf separaten 'logischen' Prozessoren im selben physischen Prozessor erlaubt.

Chipsatz

Der 915GV Northbridge (NB)- sowie ICH6 Southbridge (SB)-Chipsatz basiert sich auf eine innovative und skalierbare Architektur mit bewiesener Zuverlässigkeit und Leistung.

915GV (NB)

- Prozessor-Interface
 - Ein Intel Pentium 4 Prozessor oder Intel Celeron D Prozessor inklusive 775-Land-Package
 - 533 MT/s (133 MHz) FSB und 800 MT/s (200 MHz) FSB
 - Unterstützt Hyper-Threading-Technologie (HT-Technologie)
 - FSB-Dynamic Bus Inversion (DBI)
- Systemspeicher
 - Ein oder zwei 64-Bit DDR/DDR2 SDRAM Datenkanäle (unterstützt nur DDR400 oder DDR333, 1 DIMM, 2 Kanäle)
 - Bandbreite bis zu 8.5 GB/s (DDR2 533) in Zweikanal-Interleaved-Modus
 - 256-Mb, 512-Mb und 1-Gb DDR/DDR2-Technologie
- Integriertes Grafikgerät
 - Core-Frequenz von 333 MHz
 - Qualitativ hochwertiges 3D-Setup und Render-Engine
 - Verbessertes 3D-Grafik-Rendering



Das 915GV Chipset kann nur 256-Mb, 512-Mb und 1-Gb DDR-Technologien für x8 und x16 Zubehör unterstützen; KEINE Unterstützung für die 128-Mb DDR-Technologie. Das bedeutet, daß das 256 MB Double Side Memory Modul & 128 MB Single Side Memory Modul nicht unterstützt wird.

ICH6 (SB)

- PCI-Express: 4 PCI-Express Root-Ports, vollständige Entsprechung zu PCI-Express 1.0a
- PCI-Bus-Interface: Unterstützt PCI Rev 2.3 Spezifikation bei 33 MHz
- Integrierter Serieller ATA-Host-Controller: Vier Ports und Datentransferraten von bis zu 1.5 Gb/s (150 MB/s)
- Integrierter IDE-Controller
 - Unabhängiges Timing von bis zu zwei Laufwerken
 - Ultra ATA/100/66/33, BMIDE- und PIO-Modi
- Gemäß Azalia-Spezifikation, mit Unterstützung von 8 Audio-Output-Kanälen.
- USB2.0
 - Enthält vier UHCI-Host Controllern, unterstützt acht externe Ports
 - Enthält einen EHCI-Host Controller, der alle acht Ports unterstützt
- Integrierter LAN-Controller
 - Entspricht WfM 2.0 und IEEE 802.3
 - 10/100 Mb/s Ethernet-Unterstützung

Multi-Language Translation

Speicherunterstützung

- Unterstützung von DDR2 533/400 MHz DDR SDRAM DIMMs.
- Es können zwei ungepufferte DIMMs aufgenommen werden.
- Bis zu 1 GB pro DIMM mit maximaler Speicherkapazität von bis zu 2 GB.

Erweiterungssteckplätze

- Ein PCI-Express Lite Slot für eine Grafikschnittstelle
- Ein PCI Express x1 Slot
- Zwei 32-bit PCI v2.3-Steckplätze
- Einen 40-Pin IDE low profile-Stecker, die zwei IDE-Kanäle unterstützen
- Ein Diskettenlaufwerkanschluss
- Vier 7-Pin SATA-Stecker

Onboard IDE-Kanäle

- Ein IDE Channel unterstützt ATA-66, ATA-100
- Unterstützt die Modi PIO (Programmable Input/Output) und DMA (Direct Memory Access)
- Unterstützung für IDE Ultra DMA-Busmastering mit Transferraten von **100/66/33** MB/Sek

Serial ATA

- Vier Serial ATA Headers
- Datentransferrate übertrifft beste ATA-Werte (~150 MB/Sek.); höhere Transferaten möglich
- Low Pin Count (LPC) für Host und Geräte

AC'97 Audio CODEC

- Entspricht AC'97 Rev 2.3 Spezifikationen
- Entspricht den Leistungsanforderungen für Audio auf PC99/2001 Systemen
- Entspricht den Microsoft WHQL/WLP 2.0 Audio-Anforderungen
- HRTF 3D Positional-Audio und 10-Band Software-Equalizer

Onboard-I/O-Ports

- Zwei PS/2-Steckplätze für Maus und Tastatur
- Ein serieller Steckplatz
- Ein paralleler Steckplatz
- Ein VGA Steckplatz
- Ein LAN Steckplatz (optional)
- Vier USB2.0-Ports auf der Rückseite
- Audioanschlüsse für Mikrofon, line-in und line-out

Fast Ethernet LAN (optional)

- Integrierter Fast Ethernet MAC, physikalischer Chip und Transceiver in einem einzigen Chip
- Unterstützt 100Mbps und 10Mbps N-way Auto-Verhandlung
- Entspricht PC99/PC2001 Standards und unterstützt ACPI Versorgungs-Betriebssystem
- Unterstützt Vollduplex-Flusskontrolle (IEEE 802.3x)

BIOS-Firmware

Das Motherboard verwendet AMI BIOS, das es Benutzern gestattet, viele Systemfunktionen inkl. der Folgenden zu konfigurieren:

- Energieverwaltung
- Aufweckfunktionen
- CPU-Parameter
- CPU- und Arbeitsspeicherfrequenz

Die Firmware kann auch zur Einstellung von Parametern für verschiedene Prozessortaktgeschwindigkeiten verwendet werden.



Manche Hardwarespezifikationen und Softwareelemente können ohne Ankündigung geändert werden.

Caratteristiche

Processore

La scheda madre utilizza un tipo LGA775 di Pentium 4/Celeron D che offre le seguenti caratteristiche:

- Compatibile con processori delle serie Intel Pentium 4/Celeron D
- Supporta un bus di sistema (FSB) fino a 800/533 MHz
- Supporta CPU con tecnologia "Hyper-Threading"

La tecnologia "Hyper-Threading" induce il sistema operativo a pensare di essere collegato a due processori, questo permette di eseguire due thread in parallelo, ambedue su processori "logicamente" separati all'interno dello stesso processore.

Chipset

I chipset Intel 915GV Northbridge (NB) e ICH6 Southbridge (SB) sono basati su una architettura innovativa e scalabile dalle prestazioni e affidabilità garantite.

- 915GV (NB)**
- Interfaccia processore
 - Un processore Intel Pentium 4 o Intel Celeron D con pacchetto Land 775
 - FSB a 533 MT/s (133 MHz) e FSB a 800 MT/s (200 MHz)
 - Supporto di tecnologia Hyper-Threading (HT Technology)
 - FSB Dynamic Bus Inversion (DBI)
 - Memoria di sistema
 - Uno o due canali dati SDRAM DDR/DDR2 larghi a 64 bit (supporto di DDR 400 o DDR333, 1 DIMM, 2 canali soltanto)
 - Larghezza di banda fino a 8,5 GB/s (DDR2 533) in modalità Interleave a doppio canale
 - Tecnologia DDR/DDR2 a 256 Mb, 512 Mb e 1 Gb
 - Scheda grafica integrata
 - Frequenza core di 333 MHz
 - Setup 3D e motore di rendering di qualità superiore
 - Funzionalità avanzate di rendering per grafica 3D



Il chipset 915GV può supportare solo tecnologie DDR da 256-Mb, 512-Mb e 1-Gb per dispositivi da x8 e x16, NON supporta tecnologie DDR da 128-Mb. Cioè, non sono supportati moduli di memoria Double Side da 256-MB e moduli di memoria Single Side da 128-MB.

- ICH6 (SB)**
- PCI Express: 4 porte root PCI Express e completa conformità a PCI Express 1.0a
 - Interfaccia bus PCI: supporto della specifica PCI Rev 2.3 a 33 MHz
 - Host controller ATA seriale integrato: quattro porte e velocità di trasferimento dati fino a 1.5 Gb/s (150 MB/s)
 - Controller IDE integrato
 - Tempo indipendente per un massimo di due unità
 - Modalità Ultra ATA/100/66/33, BMIDE e PIO
 - Compatibile con le specifiche di Azalia in grado di supportare 8 canali di audio output
 - USB2.0
 - Comprende quattro host controller UHCI per il supporto di otto porte esterne
 - Comprende un host controller EHCI con supporto di tutte otto porte

Multi-Language Translation

- Controller LAN integrato
 - Conformità con WfM 2.0 e IEEE 802.3
 - Supporto di Ethernet 10/100 Mb/s

Memoria

- Supporta DDR2 533/400 MHz DDR SDRAM DIMM
- Alloggia 2 DIMM unbuffered
- Dimensione massima della DIMM pari ad 1 GB per un ammontare massimo di 2 GB di memoria

Slot di espansione

- Un slot PCI Express Lite per interfaccia grafica
- Un PCI Express x1
- Due slot PCI v2.3 a 32 bit
- Una connettori IDE a 40 pin che supportano due canali IDE
- Una interfaccia floppy disk
- Quattro connettori SATA a 7 pin

Canali IDE Integrati

- Un canale IDE con supporto di ATA-66, ATA-100
- Supporto della modalità PIO (Programmable Input/Output) e DMA (Direct Memory Access)
- Supporto per le modalità Bus Mastering e Ultra DMA ATA **100/66/33** MB/sec

ATA Seriale

- Quattro connettori Serial ATA
- Altissima velocità di trasferimento dati ATA (~150 MB/s) con la possibilità di scalabilità della velocità stessa verso valori più alti
- Pin Count ridotto sia per l'host sia per le periferich

CODEC Audio AC'97

- Conforme alle specifiche AC'97 rev. 2.3
- Megfelel a PC99/2001 rendszerek audio-teljesítményrel szembeni követelményeknek
- Megfelel a Microsoft WHQL/WLP 2.0 audio követelményeine
- Positional Audio 3D HRTF e 10 bande di equalizzazione software

Onboard I/O Porte

- Due porte PS/2 per tastiera e mouse
- Una porta seriale
- Una porta parallela
- Una porta VGA
- Una porta LAN (opzionale)
- Quattro porte USB2.0 su pannello posteriore
- Jack audio per microfono, ingresso linea e uscita linea

Fast Ethernet LAN (opzionale)

- Fast Ethernet MAC integrata, chip fisico e transceiver nello stesso chip
- Supporto della negoziazione automatica N-way a 10Mbps e 100Mbps
- Conforme con standard PC99/PC2001 e supporto di gestione del consumo energetico ACPI
- Supporto di controllo flusso full duplex (IEEE 802.3x)

Firmware BIOS

Questa scheda madre adotta un BIOS AMI che permette agli utenti di configurare le caratteristiche principali del sistema, inclusi:

- Gestione energia
- Allarmi wake up
- Parametri CPU
- Temporizzazione CPU e memoria

Il firmware può anche essere usato per impostare i parametri per diverse velocità di clock.



Alcune specifiche hardware e software potrebbero essere soggette a cambiamenti senza preavviso.

Características

Procesador

La placa principal usa un tipo LGA775 de Intel Pentium 4/Celeron D que lleva las sigtes. características:

- Acomoda procesadores de la serie Intel Pentium 4/Celeron D
- Soporta un sistema de bus (FSB) de 800/533 MHz
- Soporta CPU de tecnología "Hyper-Threading"

La tecnología "Hyper-Threading" habilita el sistema operativo para que piense como si estuviera conectado a dos procesadores, que permite dos hilos a correr en paralelo, ambos en procesadores "lógicos" dentro del mismo procesador físico.

Chipset

Los chipsets Northbridge 915GV (NB) y Southbridge ICH6 (SB) están basados en una arquitectura innovadora y escalable con fiabilidad y rendimiento comprobados.

915GV (NB)

- Interfaz del Procesador
 - Un procesador Intel Pentium 4 o Intel Celeron D con paquete 775-Land incluido
 - 533 MT/s (133 MHz) FSB y 800 MT/s (200 MHz) FSB
 - Soporta Hyper-Threading Technology (Tecnología HT)
 - Inversión de Bus Dinámico FSB/FSB Dynamic Bus Inversion (DBI)
- Memoria del Sistema
 - Uno o dos canales de datos anchos DDR/DDR2 SDRAM de 64-bit (soporta DDR400 o DDR333, 1 DIMM, 2 Canales solamente)
 - Ancho de banda hasta 8.5 GB/s (DDR2 533) en modo Interlazado de canal dual
 - Tecnologías DDR/DDR2 de 256-Mb, 512-Mb y 1-Gb
- Dispositivo de Gráficas Integrado
 - Frecuencia Central de 333 MHz
 - 3D Setup y Motor de Rendición de Alta Calidad
 - Mejoramientos de Rendición de Gráficas 3D



El chipset 915GV solamente puede soportar las tecnologías 256-Mb, 512-Mb y 1-Gb DDR para los dispositivos x8 y x16. NO soporta la tecnología 128-Mb DDR. Es decir, NO soporta el Módulo de Memoria de Doble Lado 256 MB & Módulo de Memoria de Lado Singular 128 MB.

ICH6 (SB)

- PCI Express: 4 puertos de raíz PCI Express y conformidad Total de PCI Express 1.0a
- Interfaz de Bus PCI: Soporta especificación PCI Rev 2.3 en 33 MHz
- Controlador Anfitrión ATA Serial Integrado: Cuatro puertos e índices de transferencias de datos hasta 1.5 Gb/s (150 MB/s)
- Controlador IDE Integrado
 - Cronometraje independiente hasta dos unidades
 - Modos Ultra ATA/100/66/33, BMIDE y PIO
- Conforme con la especificación Azalia que soporta 8 canales de salidas de sonido.
- USB2.0
 - Incluye cuatro Controladores Anfitriones UHCI, soporta ocho puertos externos

Multi-Language Translation

- Incluye un Controlador Anfitrión EHCI que soporta todos los ocho puertos
- Controlador LAN Integrado
 - Conformidad WfM 2.0 y IEEE 802.3
 - Soporta Ethernet de 10/100 Mb/s

Memoria

- Soporta DDR2 533/400 MHz DDR SDRAM DIMMs
- Acomoda dos DIMMS sin buffer
- Hasta 1 GB por DIMM con el tamaño de memoria máximo hasta 2 GB

Ranuras de Expansión

- Un ranura PCI Express Lite para la Interfaz de Gráficas
- Un PCI Express x1
- Dos ranuras conforme con 32-bit PCI v2.3
- Una cabezal de perfil bajo 40-pin IDE dos soporta cuatro canales IDE
- Una interfaz para unidad de disquete
- Cuatro conectores SATA de 7-pin

Canales IDE abordo

- Un Canal IDE que soporta ATA-66, ATA-100
- Soporta modos PIO (Entrada/Salida Programable/Programmable Input/Output) y modos DMA (Acceso de Memoria Directo/Direct Memory Access).
- Soporta mastering de bus IDE Ultra DMA con índices de transferencia de **100/66/33 MB/seg**

ATA Serial

- Cuatro conectores Serial ATA
- Índice de transferencia que excede el mejor ATA (~150 MB/s) con escalabilidad a índices superiores
- Cuenta de pin baja para ambos anfitrión y dispositivos

CODEC de audio AC'97

- Conformidad de las especificaciones AC'97 Rev2.3
- Satisface los requisitos de rendimiento para el audio en los sistemas PC99/2001
- Satisface los requisitos de audio de Microsoft WHQL/WLP 2.0
- Audio Posicional HRTF 3D y 10 Bandas de Ecuilizador en Software

Puertos I/O Abordos

- Dos puertos PS/2 para ratón y teclado
- Un puerto serial
- Un puerto paralelo
- Un puerto VGA
- Un puerto LAN (optativo)
- Cuatro puertos USB2.0 en el panel trasero
- Clavijas de sonido para micrófono, entrada y salida de línea

Fast Ethernet LAN (optativo)

- Fast Ethernet MAC integrado, chip físico, y transceptor en un solo chip
- Soporta N-way auto-negociación 100Mbps y 10Mbps
- Conformidad de las normas PC99/PC2001 y soporta administración de suministro ACPI
- Soporta Control de Flujo de Duplex Total/Full Duplex Flow Control (IEEE 802.3x)

Firmware de BIOS

La placa base utiliza AMI BIOS que permite a los usuarios configurar muchas funciones de sistema, incluyendo las siguientes:

- Administración de energía
- Alarmas de encendido
- Parámetros CPU
- Temporización de memoria y CPU

El firmware también puede utilizarse para ajustar los parámetros para diversas velocidades del reloj del procesador.



Algunas especificaciones de hardware y elementos de software están sujetos a cambios sin previo aviso.

Características

Processador

Esta motherboard usa um tipo LGA775 de Intel Pentium 4/Celeron D que possui as seguintes características:

- Acomoda processadores de série Intel Pentium 4/Celeron D
- Suporta um bus sistema (FSB) de 800/533 MHz
- Suporta CPU de tecnologia “Hyper-Threading”

A tecnologia “Hyper-Threading” permite que o sistema operativo “pense” que está ligado a dois processadores, permitindo que sejam executados dois threads em paralelo, ambos em processadores “lógicos” separados dentro do mesmo processador físico.

Chipset

Os chipsets da 915GV Northbridge (NB) e ICH6 Southbridge (SB) são baseados em uma arquitetura inovativa e escalável com performance e confiabilidade comprovada.

915GV (NB)

- Interface do Processador
 - Um Intel Pentium 4 processadores ou processador Intel Celeron D incluindo programa 775-Land
 - 533 MT/s (133 MHz) FSB e 800 MT/s (200 MHz) FSB
 - Suporta Tecnologia Hiper-Ligação (Tecnologia HL)
 - Inversão Bus Dinâmica FSB / FSB Dynamic Bus Inversion (DBI)
- Memória do Sistema
 - Um ou dois canais de dados DDR/DDR2 SDRAM com amplitude de 64 bit (suporta DDR400 ou DDR333, 1 DIMM, somente 2 Canais)
 - Largura de banda até 8.5 GB/s (DDR2 533) em modo interfaciado bicanal
 - Tecnologias 256-Mb, 512-Mb e 1-Gb DDR/DDR2
- Dispositivo de Gráficos Integrado
 - Frequência central de 333 MHz
 - Instalação 3D de Alta Qualidade e Dispositivo de Distribuição
 - Melhoramentos de Distribuição de Gráficos 3D



Chipset 915GV só consegue suportar tecnologias 256-Mb, 512-Mb e 1-Gb DDR para aparelhos x8 e x16, NÃO suporta tecnologia 128-Mb DDR. Ou seja, NÃO suporta Módulo de Memória Bidireccional 256 MB & Módulo de Memória Unidireccional 128 MB.

ICH6 (SB)

- PCI Express: Totalmente compatível com 4 Portas de origem PCI Express e PCI Express 1.0a
- PCI Bus Interface: Suporta Especificação PCI Rev 2.3 a 33 MHz
- Controlador Host ATA de Série Integrado: Quatro portas e taxas de transferência de dados até 1.5 Gb/s (150 MB/s)
- Controlador IDE Integrado
 - Temporização independente de até duas drives
 - Modos Ultra ATA/100/66/33, BMIDE e PIO
- Cumpre com a especificação Azalia suportando 8 Canais de saídas áudio
- USB2.0
 - Inclui quatro controladores Host UHCI, suportando oito portas externas
 - Inclui um controlador Host EHCI que suporta todas as oito portas

Multi-Language Translation

- Controlador Integrado LAN
 - Compatível com WfM 2.0 e IEEE 802.3
 - Suporte de Ethernet 10/100 Mb/s

Memória

- Suporta DDR2 533/400 MHz DDR SDRAM DIMMs
- Acomoda duas DIMMs sem buffers
- Até 1 GB por DIMM com tamanho de memória máxima de até 2 GB

Slots de expansão

- Um ranhura PCI Express Lite para Interface de Gráficos
- Um 1 x PCI Express
- Duas ranhuras compatíveis com PCI v2.3 de 32 bits
- Uma cabeçalhos de baixo perfil IDE 40 pinos, que suportam dois dispositivos IDE
- Uma interface para unidade de disquete
- Quatro conectores SATA de 7 pinos

Canais IDE na placa

- Um Canal IDE suportando ATA-66, ATA-100
- Suporta modos PIO (Input/Output Programável) e DMA (Direct Memory Access)
- Suporta IDE Ultra DMA bus mastering com razão de transferência de **100/66/33** MB/seg

Série ATA

- Quatro conectores Série ATA
- Razão de transferência excedendo o melhor ATA (~150 MB/s) com escalabilidade para razões mais altas
- Contagem baixa de pin para ambos os dispositivos e host

Codec Áudio AC'97

- Compatível com especificações AC'97 Rev2.3
- Cumpre com os requisitos de performance para áudio em sistemas PC99/2001
- Cumpre com os requisitos áudio WHQL/WLP 2.0 da Microsoft audio
- Áudio Posicional HRTF 3D e 10 Bandas de Equalizador de Software

Portas I/O na placa

- Duas portas PS/2 para o rato e teclado
- Uma porta série
- Uma porta paralela
- Uma porta VGA
- Uma porta LAN (opcional)
- Quatro portas USB2.0 no painel traseiro
- Jacks audio para microfone, line-in e line-out

Fast Ethernet LAN (opcional)

- Fast Ethernet MAC integrado, chipe físico e transreceptor em um único chipe
- Suporta auto-negociação N-way de 100Mbps e 10Mbps
- Compatível com os standards PC99/PC2001 e suporta gerenciamento de força ACPI
- Suporta Controlo de Fluxo Duplo Completo (IEEE 802.3x)

Firmware do BIOS

A motherboard usa o AMI BIOS que permite aos usuários configurar vários recursos do sistema, como:

- Gerenciamento de energia
- Alarmes de reativação
- Parâmetros da CPU
- Sincronização da CPU e memória

O firmware também pode ser usado para definir os parâmetros de diferentes velocidades de clock do processador.



Alguns itens de software e especificação de hardware estão sujeitos a alterações sem prévio aviso.

機能

プロセッサ

本マザーボードは LGA775タイプのIntel Pentium 4/Celeron D に対応したもので、次の特徴があります：

- Intel Pentium 4/Celeron D シリーズプロセッサを搭載可能。
- 800/533 MHzのシステムバス(FSB)をサポート。
- “ハイパースレッド(Hyper-Threading)”技術対応のCPUを取り付け可能。

ハイパースレッド 技術というのは、オペレーションシステムに2つのプロセッサが存在すると認識させることで、実際には2つのスロットを1つのプロセッサで同時に執行させ、平行利用を可能とする技術です。

チップセット

915GV Northbridge (NB)とICH6 Southbridge (SB) チップセットは、実証された信頼性と性能を持つ革新的で拡張性のあるアーキテクチャに基づいたものです。

- 915GV(NB)**
- プロセッサインターフェース
 - 775-Land/パッケージシリーズを含む Intel Pentium 4 やIntel Celeron D プロセッサを1つ搭載可能
 - 533 MT/秒 (133 MHz) FSB と 800 MT/秒 (200 MHz)FSBとに対応済み
 - Hyper-Threading (HT) 技術に対応済み
 - FSB DBI (Dynamic Bus Inversion)に対応済み
 - システムメモリ
 - 1つまたは2つの64ビット幅のDDR/DDR2 SDRAM テータチャネル (DDR400あるいはDDR333の場合、1 DIMMで 2チャンネルのみ)
 - 帯域幅最大8.5 GB/秒 (DDR2 533で二重チャネル Interleavedモードの場合)
 - 256-Mb、512-Mb および 1-Gb DDR/DDR2 技術導入
 - 統合式グラフィック装置
 - コア周波数が333 MHz
 - 高品質3D Setup& Renderエンジン
 - 3D グラフィックレンダリング強化機能



915GVチップセットは 8倍速または16倍速のデバイスの256-Mbや512-Mb、1-Gb のDDR技術のみに対応で、128-Mb DDR 技術に対応しません。具体的に、256 MBの二面メモリモジュールや128 MBの片面メモリモジュールが対応されませんので、ご注意ください。

- ICH6 (SB)**
- PCI Express: PCI Express ルートポートが4つで、PCI Express 1.0a に完全対応
 - PCI バスインターフェース: 33MHzにおける PCI Rev 2.3 規格に対応
 - 統合式シリアルATA ホストコントローラ: ポートが4つで、最大 1.5 Gb/秒 (150 MB/秒)までのデータ転送率を提供
 - 統合型IDEコントローラ
 - 最大2つの装置を独立のタイミングで対応
 - Ultra ATA/100/66/33、BMIDE および PIO モードをサポート
 - Azalia 基準に互換性で、8チャンネルのオーディオ出力をサポート
 - USB2.0
 - UHCI ホストコントローラを4つ搭載し、それで8つの外部ポートを提供
 - EHCI Host Controllerを1つ搭載し、それで上記の8つポートをすべて対応

- 統合式LANコントローラ
 - WfM 2.0 とIEEE 802.3とに対応
 - 10/100 Mb/秒イーサネットをサポート

メモリ

- DDR2 533/400 MHzのDDR SDRAM DIMMに対応。
- 2つの非バッファードDIMMを搭載。
- 各DIMMスロットに1 GBまで装着可能で、合計2GBまでをサポート。

拡張スロット

- PCI Express Lite スロットが1つ
- PCI Express x1スロットが1つ
- 32ビットPCI v2.3 互換性スロットが2つ
- 40ピンIDEロープロファイルヘッダー(2つのIDEチャンネルをサポート)が1つ
- FDドライブ インターフェイスが1つ
- 7ピン SATAコネクタが4つ

オンボードIDEチャンネル

- IDE チャンネルが1つで、それで ATA-66と ATA-100とをサポート可能
- PIO (Programmable Input/Output) と DMA (Direct Memory Access)との転送モードをサポート
- 100/66/33 MB/秒における IDE Ultra DMA バスマスタ機能をサポート

シリアル ATA

- Serial ATA コネクタが4つ
- 転送率が既存のATA (~150 MB/秒)の最高転送率よりも高く、将来においてさらなる向上が可能
- ホスト側や装置側の連結端のピン数が従来よりも削減

AC'97 Audio CODEC

- AC'97 v2.3仕様に準拠
- PC99/2001 システムに関するオーディオ要求に適合
- Microsoft WHQL/WLP 2.0 オーディオ要求に適合
- HRTF 3D ポジショナル・オーディオ と 10 段のソフト式イコライザ

オンボード I/Oポート

- マウスとキーボード用のPS/2ポート が2つ
- シリアルポート が1つ
- パラレルポート が1つ
- VGAポート が1つ
- LANポート が1つ(オプション)
- バックパネル USB2.0 ポートが4つ
- マイク、ラインイン、ラインアウト用オーディオジャック

高速イーサネット LAN 機能(オプション)

- 高速イーサネット MAC、物理層チップ、およびトランシーバーを単一のチップに統合
- 100Mb/秒と10Mb/秒との Nウェイ自動折衝動作をサポート
- PC99/PC2001標準に準拠し、ACPI 電源管理機能をサポート
- 全二重フロー制御 (IEEE 802.3x)をサポート

BIOSファームウェア

本マザーボードはAMI BIOSを採用し、次の機能を含めた多様なシステム構成を行えます。

- 電源管理
- ウェークアップアラーム
- CPUパラメータ
- CPUおよびメモリのタイミング

さらに、所定のパラメータを設定することによって、プロセッサのクロック速度を変更することもできます。



一部のハードウェア仕様とソフトウェアアイテムは、予告なしに変更することがあります。

특징

프로세서

본 마더보드는 LGA775 타입의 인텔 펜티엄 4/셀러론 D 을 사용하여 다음과 같은 특성을 지닌다:

- 인텔 펜티엄 4/셀러론 D 시리즈 프로세서 사용
- 800/533MHz시스템 버스(FSB) 지원
- "Hyper-Threading" 기술 CPU 지원

"Hyper-Threading" 기술은 운영체제를 두 개의 프로세서에 연결한 것처럼 두개의 트래드를 패러럴로 실행하여 같은 물리적 프로세서 안에서 각기 다른 논리적 프로세서를 실행할 수 있게 한다.

칩셋

915GV Northbridge (NB) 와 ICH6 Southbridge (SB) 칩셋은 혁신적이고 범용성을 지닌 아키텍처를 바탕으로 인정된 신뢰성과 성능을 지닌다.

915GV(NB)

- 프로세서 인터페이스
 - 인텔 펜티엄 4 프로세서 또는 인텔 셀러론 D 프로세서 1 개, 775-Land 패키지 포함
 - 533 MT/s (133 MHz) FSB 및 800 MT/s (200 MHz) FSB
 - Hyper-Threading 기술 (HT 기술) 지원
 - FSB Dynamic Bus Inversion (DBI)
- 시스템 메모리
 - 1개 또는 2 개의 64 비트 와이드 DDR/DDR2 SDRAM 데이터 채널 (DDR400 또는 DDR333, 1 DIMM, 2 채널 지원)
 - 듀얼 채널 인터리브드 모드에서 최대 대역폭 8.5 GB/s (DDR2 533)
 - 256-Mb, 512-Mb 및 1-Gb DDR/DDR2 기술
- 통합 그래픽 장치
 - 코어 주파수 333 MHz
 - 고품질 3D 셋업 및 렌더 엔진
 - 3D 그래픽 렌더링 강화



915GV 칩셋은 x8 및 x16 장치를 위해 256-Mb, 512-Mb, 1-Gb DDR 기술만을 지원하고, 128-Mb DDR 기술은 지원하지 않는다. 즉, 256 MB 양면 메모리 모듈 및 128 MB 단면 메모리 모듈을 지원하지 않는다.

ICH6 (SB)

- PCI Express: 4 PCI Express 루트 포트 및 PCI Express 1.0a 완전 부합
- PCI 버스 인터페이스: 33 MHz 로 PCI 2.3 사양 지원
- 통합 시리얼 ATA 호스트 컨트롤러: 4 개의 포트 및 데이터 전송 속도 최대 1.5 Gb/s (150 MB/s)
- 통합 IDE 컨트롤러
 - 최대 2 가지 장치의 독립적인 타이밍
 - Ultra ATA/100/66/33, BMIDE 및 PIO 모드
- 오디오 출력에 8 개 채널을 지원하는 Azalia 사양 부합
- USB2.0
 - 4 개의 UHCI 호스트 컨트롤러 포함. 8 개의 외부 포트 지원
 - 8 개 포트를 지원하는 1 개의 EHCI 호스트 컨트롤러 지원
- 통합 LAN 컨트롤러
 - WfM 2.0 및 IEEE 802.3 부합
 - 10/100 Mb/s 이더넷 지원

메모리

- DDR2 533/400 MHz DDR SDRAM DIMM 지원
- 2 개의 unbuffered DIMM 사용
- DIMM 당 최대 1 GB, 최대 메모리 2 GB

확장 슬롯

- 그래픽 인터페이스를 위한 PCI Express Lite 1 개
- PCI Express 1 개 x 슬롯 1 개
- 32 비트 PCI v2.3 호환 슬롯 2 개
- 2 개의 IDE 채널을 지원하는 40 핀 IDE 로우 프로파일 헤더 1 개
- 플로피 디스크 드라이브 인터페이스 1 개
- 7 핀 SATA 커넥터 4개

보드 내장 IDE

- 내장 IDE 커넥터 ATA-66, ATA-100 1 개
- PIO (Programmable Input/Output) 및 DMA (Direct Memory Access) 모드 지원
- 전송 속도 33/66/100 MB/sec의 IDE Ultra DMA 버스 마스터링 지원

시리얼 ATA

- 시리얼 ATA 커넥터 4 개
- 범용성을 지닌 최대 ATA (~150 MB/s) 를 증가하는 전송 속도
- 호스트 및 장치의 적은 핀 수

AC'97 오디오 코덱

- AC'97 2.3 사양 부합
- PC99/2001 시스템의 오디오를 위한 퍼포먼스 요구 조건 부합
- 마이크로소프트 WHQL/WLP 2.0 오디오 요구 조건 부합
- HRTF 3D Positional Audio 및 10 밴드의 소프트웨어 이퀄라이저

보드 내장 I/O 포트

- 마우스 및 키보드 용 PS/2 포트 2 개
- 시리얼 포트 1개
- 패러럴 포트 1 개
- VGA 포트 1개
- LAN 포트 1개(선택 사항)
- 후면 USB 2.0 포트 4 개
- 마이크의 라인 입력 및 라인 출력을 위한 오디오 잭

패스트 이더넷 LAN (선택 사항)

- 싱글 칩 위에 통합 패스트 이더넷 MAC, 물리적 칩, 및 트랜시버
- 100Mbps 및 10Mbps N-way auto-negotiation 지원
- PC99/PC2001 표준 부합 및 ACPI 전원 관리 지원
- Full 듀플렉스 플로우 제어 (IEEE 802.3x) 지원

BIOS 펌웨어

본 메인보드는 AMI BIOS 를 사용하여 사용자는 다음과 같은 시스템 기능을 구성할 수 있다

- 전원 관리
- Wake-up 알람
- CPU 파라미터
- CPU 및 메모리 타이밍

펌웨어는 다른 프로세서의 클럭 속도를 설정하는 데도 사용될 수 있다



하드웨어 사양 및 소프트웨어 아이템은 사전 통보없이 변경될 수 있습니다

功能 處理器

本主機板適用單顆 LGA775型Intel Pentium 4/Celeron D，且具有如下功能：

- 可搭載Intel Pentium 4/Celeron D系列處理器
- 支援高達800/533MHz之系統匯流排(FSB)
- 支援使用超執行緒(Hyper-Threading)技術之CPU

利用“超執行緒(HT)”技術，可使作業系統在相當於裝上了兩具處理器的狀態下運作：利用一個“實體”處理器模擬出兩個獨立的“邏輯”處理器，同時執行兩個工作緒。

晶片組

915GV北橋(NB)及ICH6南橋(SB)晶片組在研發設計上採用了創新且具擴充性之架構，具備優的可靠性及性能。

915GV (NB)

- 處理器介面
 - 一顆Intel Pentium 4 處理器或 Intel Celeron D 處理器 包括 775- Land封裝型
 - 533 MT/秒 (133 MHz) FSB 及800 MT/秒 (200 MHz)FSB
 - 支援超執行緒技術(HT技術)
 - 支援FSB 動態反向 (DBI)
- 系統記憶體
 - 1或2個64位元DDR/DDR2 SDRAM 資料通道(支援DDR400 or DDR333(僅適用1 DIMM, 2通道))
 - 在雙通道交錯模式下，頻寬最高可達8.5 GB/秒 (DDR2 533)
 - 支援256-Mb、512-Mb 及1-Gb DDR/DDR2 技術
- 整合繪圖裝置
 - 核心頻率333 MHz
 - 高品質3D 算圖(Setup及Render) 引擎
 - 3D繪圖多樣式算圖功能(Rendering Enhancement)



915GV 晶片組僅能支援8倍速及16倍速之256-Mb、512-Mb、及1-Gb DDR技術，惟，並不支援128-Mb DDR 技術。具體而言，不支援256 MB雙面記憶體模組及128 MB單面記憶體模組。

ICH6 (SB)

- PCI Express：4個PCI Express 根埠且完全相同於PCI Ex-press 1.0a 規格
- PCI 區流排介面：支援33MHz之PCI Rev 2.3標準
- 整合式序列ATA主控器：4個埠且資料傳輸率高達1.5 Gb/秒 (150 MB/秒)
- 整合式IDE控制器
 - 獨立時序控制，支援最多至兩個IDE裝置
 - 支援Ultra ATA/100/66/33、BMIDE 及PIO模式
- 相容於Azalia規格，支援8 聲道音訊輸出
- USB2.0
 - 設有4個UHCI 主控器，支援額外8個埠
 - 設有1個EHCI 主控器，支援所有8個埠
- 整合式LAN控制器
 - 相容於WiM 2.0 及IEEE 802.3
 - 支援10/100 Mb/秒乙太網路

記憶體

- 支援DDR2 533/400 MHz DDR SDRAM DIMM
- 可安裝2個非緩衝式DIMM
- 各DIMM可安裝1GB記憶體，共可支援高達2GB的記憶體容量

擴充槽

- 1 個繪圖卡用PCI Express Lite 介面
- 1 個PCI Express x1 槽
- 2 個32位元PCIv2.3插槽
- 1 個40針IDE低通接頭(支援2個IDE通路)
- 1 個軟碟機介面
- 4 個 7針型SATA連接器

機載IDE通道

- 1個IDE通道，支援ATA-66及ATA-100
- 支援PIO(可程式輸出入)模式及DMA(直接記憶體存取)模式
- 支援IDE Ultra DMA 匯流排主控功能，提供100/66/33 MB/秒傳輸率

序列ATA

- 4個序列ATA連接器
- 傳輸率超過現有頂級的ATA(~150 MB/秒)，並且未來還可進一步提高
- 主控端及裝置端之連接針的支數少

AC'97 音訊編解碼器

- 相容於AC'97 Rev2.3規格
- 符合PC99/2001系統音訊標準要求
- 符合Microsoft WHQL/WLP 2.0音訊標準
- HRTF 3D方位音效及10波段之軟體等化器

機載輸出入埠

- 2 個 PS/2 埠，供滑鼠與鍵盤使用
- 1 個串列埠
- 1 個平行埠
- 1 個VGA埠
- 1 個區域網路埠(選購)
- 4個背板USB2.0埠
- 麥克風音頻插座、線級輸入及線級輸出

高速乙太區域網路功能(選項)

- 高速乙太網路 MAC、實體層晶片、及收發模組整合成一個晶片
- 支援100Mb/秒及10Mb/秒 N向自動協商功能
- 相容於PC99/PC2001標準及支援ACPI 電源管理功能
- 支援全雙工串流控制 (IEEE 802.3x)

BIOS 韌體

本主機板使用AMI BIOS，使用者可以組態設定許多系統功能，包括如下：

- 電源管理
- 喚醒警鈴
- CPU參數
- CPU及記憶體的時脈定時

此外，也可藉由參數的設定，調整處理器的時脈速度。



部份硬體規格和軟體內容可能會在未經通知的情況下更動，敬請見諒。

功能

处理器

此主板使用 LGA775 型 Intel Pentium 4/Celeron D CPU，具备以下特点：

- 支持 Intel Pentium 4/Celeron D 系列处理器
- 支持 800/533MHz 系统总线 (FSB)
- 支持“多线程(Hyper-Threading)”技术 CPU

“多线程”技术可以让操作系统认为自己连接了两个处理器，允许两个线程并行运行，每个线程位于同一处理器中的单独“逻辑”处理器中。

芯片组

915GV 北桥 (NB) 和 ICH6 南桥 (SB) 芯片组是基于一种新型的、可扩展的架构，能提供已经证明的可靠性和高性能。

915GV (NB)

- 处理器接口
 - 1 个 Intel Pentium 4 处理器或 Intel Celeron D 处理器，含 775-Land 组件
 - 533 MT/s (133 MHz) FSB 和 800 MT/s (200 MHz) FSB
 - 支持超线程技术 (HT 技术)
 - FSB 动态总线反向 (DBI)
- 系统内存
 - 1 个或 2 个 64 位宽 DDR/DDR2 SDRAM 数据通道 (支持 DDR400 或 DDR333, 1 DIMM, 仅 2 通道)
 - 双通道交叉模式下带宽可达 8.5 GB/s (DDR2 533)
 - 256-Mb、512-Mb 和 1-Gb DDR/DDR2 技术
- 集成图形设备
 - 333 MHz 核心频率
 - 高质量 3D 设置和着色引擎
 - 3D 图形着色增强



915GV 芯片组仅支持用于 x8 和 x16 设备的 256-Mb、512-Mb 和 1-Gb DDR 技术，不支持 128-Mb DDR 技术。也就是说该芯片组不支持 256 MB 双面内存模块和 128 MB 单面内存模块。

ICH6 (SB)

- PCI Express: 4 个 PCI Express 根端口，完全符合 PCI Express 1.0a 标准
- PCI 总线接口: 支持 PCI Rev 2.3 规格 (33 MHz 下)
- 集成 Serial ATA 主控器: 4 个端口，数据传输速率可达 1.5 Gb/s (150MB/s)
- 集成 IDE 控制器
 - 最多 2 个设备的独立定时
 - Ultra ATA/100/66/33、BMIDE 和 PIO 模式
- 符合 Azalia 规格，支持 8 声道音频输出
- USB2.0
 - 含 4 个 UHCI 主控器，支持 8 个外部端口
 - 含有 1 个支持所有 8 个端口的 EHCI 主控器
- 集成 LAN 控制器
 - 符合 WfM 2.0 和 IEEE 802.3 标准
 - 支持 10/100 Mb/s 以太网

内存

- 支持 DDR2 533/400 MHz DDR SDRAM DIMM
- 支持 2 个非缓冲 DIMM
- 每个插槽支持 1 GB，总共最大可支持 2 GB

扩展槽

- 1 个用于图形接口的 PCI Express Lite
- 1 个 PCI Express x1 插槽
- 2 个 32 位 PCI v2.3 扩展槽
- 1 个 40-pin IDE 紧凑型接口，支持 2 个 IDE 通道
- 1 个软驱接口
- 4 个 7 针 SATA 接口

Onboard IDE 通道

- 1 个支持 ATA-66/ATA-100 的 IDE 通道
- 支持 PIO (程控输入/输出) 和 DMA (直接存储器存取) 模式
- 支持 IDE Ultra DMA 总线控制，传输速率可达 100/66/33 MB/sec

Serial ATA

- 4 个 Serial ATA 接口
- 传输速率超过 ATA (~150 MB/s)，可扩展到更高速率
- 主机和设备管脚数量少

AC'97 音频编解码器

- 兼容 AC'97 v2.3 规格
- 符合 PC99/2001 系统音频要求
- 符合 Microsoft WHQL/WLP 2.0 音频要求
- HRTF 3D 定位音频和 10 段软件均衡器

集成 I/O 端口

- 2 个用于连接鼠标和键盘的 PS/2 端口
- 1 个串口
- 1 个并口
- 1 个 VGA
- 1 个 LAN (可选)
- 4 个后面板 USB 2.0 端口
- 麦克风、线入和线出声音插孔

快速以太网 LAN (可选)

- 单芯片集成了快速以太网 MAC、物理芯片和收发器
- 支持 100Mbps 和 10Mbps N 路自协商
- 符合 PC99/PC2001 标准和支持 ACPI 电源管理
- 支持全双工数据流控制 (IEEE 802.3x)

BIOS

此主板使用 AMI BIOS，可以让用户自己配置以下系统功能：

- 电源管理
- 唤醒报警
- CPU 参数
- CPU 和记忆的定时

还可用于设置不同处理器时钟速度的参数。



某些硬件规格和软件项目若有更改恕不另行通知。

Характеристики

Процессор

Материнская плата использует процессоры Intel Pentium 4/Celeron D типа LGA775 и обладает следующими характеристиками:

- Размещает процессоры серии Intel Pentium 4/Celeron D
- Поддерживает системные шины (FSB) с частотой 800/533MHz
- Поддерживает технологию CPU "Hyper-Threading"

Технология "Hyper-Threading" «убеждает» операционную систему в том, что в машине имеется два процессора; это позволяет параллельно обслуживать два процесса, причем каждый из процессов обслуживается отдельным «логическим» процессором в пределах одного физического процессора.

Чипсет

Чипсеты 915GV «Северный мост» (Northbridge, NB) и ICH6 «Южный мост» (Southbridge, SB) построены с использованием инновационной масштабируемой архитектуры, обеспечивающей высокую надежность и производительность.

915GV (NB)

- Интерфейс процессора
 - Один процессор Intel Pentium 4 или Intel Celeron D с цоколевкой 775-Land package
 - 533 МТ/с (133 МГц) FSB и 800 МТ/с (200 МГц) FSB
 - Поддержка технологии Hyper-Threading (HTT)
 - Технология FSB Dynamic Bus Inversion (DBI)
- Системная память
 - Один или два 64-битных канала памяти DDR/DDR2 SDRAM (поддержка DDR400 или DDR333, 1 DIMM, только 2 канала)
 - Скорость трансфера данных до 8.5 Гб/с (DDR2 533) в двухканальном режиме чередования
 - Технология 256-Мб, 512-Мб и 1-Гб DDR/DDR2
- Интегрированный графический интерфейс
 - Тактовая частота 333 МГц
 - Высококачественная графика 3D с быстрым рендерингом
 - Улучшенный рендеринг трехмерной графики 3D



Чипсет 915GV поддерживает только технологии 256-Мб, 512-Мб and 1-Гб DDR для устройств x8 / x16 и НЕ ПОДДЕРЖИВАЕТ технологию 128-Мб DDR. Таким образом, поддержка модулей памяти 256 МБ Double Side и 128 МБ Single Side ОТСУТСТВУЕТ.

ICH6 (SB)

- PCI Express: 4 порта PCI Express и полная совместимость с PCI Express 1.0a
- Интерфейс шины PCI: поддержка спецификации PCI 2.3 33МГц
- Встроенный контроллер хоста Serial ATA: 4 порта со скоростью трансфера данных до 1.5 Гб/с (150 МБ/с)
- Встроенный контроллер IDE
 - Независимый тайминг двух дисков
 - Ultra ATA/100/66/33, обслуживает режимы BMIDE и PIO
- Совместимость со спецификацией Azalia, поддержка до 8 каналов аудиовыхода
- USB2.0
 - Четыре контроллера хоста UHCI, поддержка восьми внешних портов
 - Включает один контроллер хоста EHCI с поддержкой всех восьми портов

Multi-Language Translation

- Встроенный контроллер LAN
 - Совместимость с технологией WfM 2.0 и IEEE 802.3
 - Обслуживает Ethernet 10/100 Мб/с

Память

- Поддержка памяти DDR2 533/400 МГц DDR SDRAM DIMM
- Обслуживает 2 модуля небуферизованной памяти DIMM
- Обслуживает до 1 ГБ на модуль DIMM (максимально до 2 ГБ памяти)

Возможности расширения

- Один разъем для карты графики PCI Express Lite
- Один слота PCI Express x1
- Два 32-битных слота PCI v2.3
- Один низкопрофильный 40-штырьковый слот IDE, обеспечивающий поддержку двух устройств IDE
- Один разъем для накопителя на гибких дисках
- Четыре 7-штырьковых коннектора SATA

Интегрированные каналы IDE

- Один канал IDE с поддержкой ATA-66, ATA-100
- Поддержка режимов PIO (программируемый вход/выход) и DMA (Direct Memory Access)
- Поддержка захвата шины IDE Ultra DMA со скоростью трансфера данных 100/66/33 МБ/сек

Serial ATA

- Четыре коннектора Serial ATA
- Скорость трансфера данных превышающая самые скоростные ATA (~150 МБ/с) с возможностью дальнейшего повышения
- Низко-пиновые интерфейсы хоста и устройств

AC'97 Аудио CODEC

- Совместимость со спецификацией AC'97 вер.2.3
- Соответствие требованиям для аудио в системах PC99/2001
- Соответствие требованиям для аудио Microsoft WHQL/WLP 2.0
- Позиционное аудио HRTF 3D и 10-канальный эквалайзер

Встроенный вход/выход порта

- Два порта PS/2 для подключения мыши и клавиатуры
- Один серийный порт
- Один параллельный порт
- Один порт VGA
- Один порт LAN (опционально)
- Четыре порта USB 2.0 на тыльной панели
- Гнездо для подключения микрофона, гнезда аудио-входа и выхода

Быстрый Ethernet LAN (опционально)

- Интеграция Fast Ethernet MAC, физического чипа и трансивера в едином чипе
- Поддержка автовыбора режимов N-way 100Mbps и 10Mbps
- Совместимость со стандартами PC99/PC2001 и поддержка управления электропитанием ACPI
- Поддержка режима Flow Control (IEEE 802.3x) в полном дуплексе

BIOS

Плата работает под AMI BIOS, который позволяет пользователю конфигурировать различные характеристики системы:

- Управление питанием
- Сигналы пробуждения системы
- Параметры CPU
- Время доступа для CPU и памяти

BIOS допускает также установку параметров для различных частот процессора.



Некоторые параметры платы и характеристики ее программного обеспечения могут быть изменены без предварительного уведомления.

Cechy

Procesor

Płyta główna obsługuje procesory Intel Pentium 4/Celeron D typu LGA775 i posiada następujące właściwości:

- Obsługuje procesory z serii Intel Pentium 4/Celeron D
- Obsługuje szynę systemową (FSB) 800/533MHz
- Zabezpiecza technologią CPU "Hyper-Threading"

Technologia "Hyper-Threading" powoduje, że system "myśli", że posiada dwa procesory i wykonuje równoległe dwa procesy; za wykonanie każdego procesu odpowiedzialny jest jeden z dwóch "logicznych" procesorów w ramach jednego fizycznego procesora

Chipset

Mostek północny (NB) 915GV i mostek południowy (SB) ICH6 chipsetu oparty jest na nowatorskiej i skalowalnej architekturze o sprawdzonej niezawodności i funkcjonalności.

- 915GV (NB)**
- Interfejs procesora
 - One Intel Pentium 4 processor or Intel Celeron D processor including 775-Jeden procesor Intel Pentium 4 lub procesor Intel Celeron D 775-kontaktowego typu
 - 533 MT/s dla szyny FSB (133 MHz) i 800 MT/s dla szyny FSB (200 MHz)
 - Dostosowana do technologii Hyper-Threading (technologii HT)
 - Szyna FSB z właściwością Dynamic Bus Inversion (DBI)
 - Układ pamięci
 - Jeden lub dwa 64-bitowe banki typu DDR/DDR2 SDRAM (obsługuje DDR400 lub DDR333, 1 DIMM, tylko 2 kanały)
 - Szybkość do 8.5 GB/s (DDR2 533) na dwu kanałach w trybie Interleaved
 - Pamięć o technologiach DDR/DDR2 o pojemności 256-Mb, 512-Mb oraz 1-Gb
 - Zintegrowany układ graficzny
 - Częstotliwość podstawowa 333 MHz
 - Układ 3D o wysokiej jakości i z układem renderującym
 - Grafika 3D z wspomaganie renderującym



Chipset 915GV obsługuje tylko pamięci 256-Mb, 512-Mb i 1-Gb w technologii DDR dla urządzeń x8 i x16 I NIE OBSŁUGUJE pamięci 128-Mb w technologii DDR. To oznacza, że pamięci 256 MB Double Side i 128 MB Single Side NIE SĄ OSŁUGIWANE.

- ICH6 (SB)**
- PCI Express: 4 gniazda PCI Express całkowicie zgodne z protokołem PCI Ex-press w wersji 1.0a
 - Układ szyny PCI: obsługuje PCI zgodnie z protokołem w wersji 2.3 przy częstotliwości 33MHz
 - Zintegrowany układ kontrolera Serial ATA: cztery złącza o szybkości transferu do 1,5 Gb/s (150 MB/s)
 - Zintegrowany kontroler IDE
 - Niezależna obsługa dwu stacji dysków
 - Obsługuje dyski typu Ultra ATA/100/66/33, w trybach BMIDE oraz PIO
 - Zgodny ze standardem Azalia obsługuje 8 kanałowe wyjście audio
 - USB 2.0
 - Zawiera cztery układy kontrolera UHCI, obsługujące osiem zewnętrznych gniazd

Multi-Language Translation

- Zawiera jeden układ kontrolera EHCI, który obsługuje te osiem portów
- Zintegrowany kontroler LAN
 - Zgodne z WfM 2.0 i IEEE 802.3
 - Obsługuje Ethernet z szybkością 10/100 Mb/s

Pamięć

- Obsługuje pamięci typu DDR2 533/400 MHz DDR SDRAM DIMM
- Zaopatrzony w dwa gniazda niebuforowanej pamięci typu DIMM
- Obsługuje pamięć DIMM do pojemności 1 GB każda; maksymalna możliwa pojemność pamięci do 2 GB

Możliwości rozbudowy

- Jedno gniazdo PCI Express Lite dla karty graficznej
- Jedno gniazdo typu PCI Express x1
- Dwa 32-bitowych gniazda zgodnych z PCI w wersji 2.3
- Jedno 40-nóżkowe złącze niskoprofilowe obsługujące dwa urządzenia IDE
- Jedno złącze obsługujące stacje dyskietek
- Cztery 7-nóżkowe złącza SATA

Wbudowane złącza IDE

- Jedno złącze obsługujące urządzenia typu ATA-66, ATA-100
- Obsługuje tryby PIO (Programowalne Wejście/Wyjście) i DMA (Pamięć bezpośredniego dostępu)
- Obsługuje szynę IDE Ultra DMA z szybkościami przesyłu 100/66/33 MB/s

Serial ATA

- Cztery gniazda Serial ATA
- Niezmiernie wysoka szybkość przesyłania (~150 MB/s) z możliwością jej zwiększania
- Mała liczba nóżek zarówno dla gniazda jak i dla stacji (urządzenia)

AC'97 audio CODEC

- Zgodność z AC'97 ver. 2.3
- Spełnia wymagania dla audio w systemie PC99/2001
- Spełnia wymagania stawiane audio przez firmę Microsoft w systemie WHQL/WLP 2.0
- Audio HRTF 3D Positional i 10-kanałowy Equalizer

Zintegrowana obsługa sieci We/Wy

- Dwa gniazda PS/2 dla myszy i klawiatury
- Jedno gniazdo szeregowo
- Jedno gniazdo równoległe
- Jedno gniazdo VGA
- Jedno gniazdo LAN (opcjonalnie)
- Cztery gniazda USB 2.0 na tylnej ścianie
- Gniazdo wejściowe mikrofonowe, gniazdo wejściowe i wyjściowe dźwięku (audio)

Szybki ethernet LAN (opcjonalnie)

- Zintegrowany Fast Ethernet MAC, fizycznie oddzielny chip, oraz transceiver (urządzenie nadawczo-odbiorcze) na jednym chipie
- Obsługuje prędkości przesyłania 100Mbps i 10Mbps z opcją auto-wyboru N-way
- Zgodność ze standardami PC99/PC2001 i obsługuje zarządzanie energią w standardzie ACPI
- Obsługuje kontrolę przesyłania w standardzie Full Duplex (IEEE 802.3x)

Firmowy BIOS

Płyta główna wyposażona jest w BIOS firmy AMI, który pozwala użytkownikowi konfigurować wiele cech systemu włączając w to następujące właściwości:

- Zarządzanie poborem mocy
- Alarmy typu Wake-up
- Parametry pracy procesora
- Ustalenia szybkości pracy procesora i pamięci

BIOS może być używany do ustalania parametrów wpływających na szybkości pracy zegara procesora.



Niektóre parametry dotyczące płyty i jej oprogramowania mogą ulec zmianie bez uprzedniego powiadomienia.

Vlastnosti

Procesor

Tato základní deska je určena pro procesory Intel Pentium 4/Celeron D LGA775 a může nabídnout následující vlastnosti:

- Použití procesorů řady Intel Pentium 4/Celeron D
- Podporuje taktování systémové sběrnice (FSB) na frekvenci 800/533 MHz
- Podporuje technologii CPU „Hyper-Threading“

Technologie „Hyper-Threading“ umožňuje operačnímu systému pracovat tak, jako by byl připojen ke dvěma procesorům, protože je možné pracovat se dvěma toky programového kódu (vlákny) paralelně najednou, přičemž jsou k dispozici samostatné „logické“ procesory umístěné v rámci jednoho fyzického procesoru.

Čipová sada

Čipy northbridge (NB) 915GV a southbridge (SB) ICH6 jsou založeny na inovativní a škálovatelné architektuře s ověřenou spolehlivostí a výkonností.

- 915GV (NB)**
- Rozhraní procesoru
 - Jeden procesor Intel Pentium 4 nebo Intel Celeron D včetně sady 775
 - Sběrnice FSB 533 MT/s (133 MHz) a 800 MT/s (200 MHz)
 - Podpora technologie „Hyper-Threading“ (technologie HT)
 - Dynamická inverse sběrnice FSB (DBI)
 - Systémová paměť
 - Jeden nebo dva 64bitové kanály DDR/DDR2 SDRAM (podpora DDR400 nebo DDR333, 1 DIMM, pouze 2 kanály)
 - Šířka pásma až 8,5 GB/s (DDR2 533) v dvojkanálovém prokládaném režimu
 - 256 MB, 512 MB a 1 GB technologie DDR/DDR2
 - Integrovaný grafický systém
 - Frekvence jádra 333 MHz
 - Vysoce kvalitní nastavení a 3D vykreslovací jádro
 - Vylepšení vykreslované 3D grafiky



Čipová sada 915GV je schopná podporovat pouze technologii 256-Mb, 512-Mb a 1 Gb DDR pro zařízení x8 a x16, NIKOLIV technologie 128-Mb DDR. To znamená, že NEJSOU podporovány paměťové moduly 256 MB DIMM & 128 MB SIMM.

- ICH6 (SB)**
- Sběrnice PCI Express: 4 PCI Express kořenové porty a plná shoda se standardem PCI Express 1.0a
 - Rozhraní PCI: Podpora specifikace PCI revize 2.3 na taktovací frekvenci 33 MHz
 - Integrovaný hostitelský řadič Serial ATA: Čtyři porty a rychlosti přenosu dat až 1,5 GB/s (150 MB/s)
 - Integrovaný řadič IDE
 - Nezávislé časování až dvou diskových jednotek
 - Ultra ATA/100/66/33, režimy BMIDE a PIO
 - Splňuje požadavky standardu Azalia, který podporuje 8kanálový zvukový výstup
 - USB 2.0
 - Zahnuje čtyři hostitelské řadiče UHCI podporující osm externích portů
 - Zahnuje jeden hostitelský řadič EHCI podporující všech osm portů

Multi-Language Translation

- Integrovaný řadič LAN
 - Shoda se standardy WfM 2.0 a IEEE 802.3
 - Podpora 10/100 MB/s Ethernet

Paměť

- Podporuje paměťové moduly DDR2 533/400 MHz DDR SDRAM DIMM
- Instalovat je možné až dva DIMM moduly bez vyrovnávací paměti
- Až 1 GB paměti na jeden modul DIMM s maximální velikostí paměti do 2 GB

Možnosti rozšíření

- Jedna patice PCI Express x16 pro grafickou kartu
- Jedna patice PCI Express x1
- Dvě 32bitové patice PCI v2.3
- Jeden nízkoprofilový 40kolíkový konektor IDE podporující připojení dvou zařízení standardu IDE
- Jedno rozhraní pro disketovou mechaniku
- Čtyři 7kolíkové konektory SATA

Integrované kanály IDE

- Jeden kanál IDE podporující ATA-66, ATA-100
- Podpora režimů PIO (programovatelný vstup/výstup) a DMA (přímý přístup do paměti)
- Podpora řízení sběrnice IDE Ultra DMA s přenosovými rychlostmi 100/66/33 MB/s

Serial ATA

- Čtyři konektory Serial ATA
- Přenosové rychlosti přesahující specifikace ATA (asi 150 MB/s) se škálovatelností na vyšší hodnoty
- Nízký počet kolíků hostitelského rozhraní i zařízení

Zvukový kodek AC'97

- Splňuje požadavky standardu AC'97 v2.3
- Splňuje výkonnostní požadavky pro audio zařízení na systémech PC99/2001
- Splňuje požadavky pro audio zařízení Microsoft WHQL/WLP 2.0
- Audio HRTF 3D a 10pásomový softwarový ekvalizér

Integrované rozšíření vstup/výstup

- Dva porty PS/2 pro myš a klávesnici
- Jeden sériový port
- Jeden paralelní port
- Jeden port VGA
- Jeden port LAN (volitelně)
- Čtyři porty USB 2.0 na zadním panelu
- Zvukové konektory pro mikrofon, zvukový vstup a výstup

Fast Ethernet LAN (volitelně)

- Integrované rozhraní Fast Ethernet MAC, fyzické umístění obvodu i přijímače v jednom čipu
- Podpora provozu 100 Mbps a 10Mbps s Ncestným automatickým vyjednáváním
- Shoda se standardem PC99/PC2001 a podpora správy napájení ACPI
- Podpora plně duplexního řízení toku dat (IEEE 802.3x)

Firmware BIOS

Základní deska využívá BIOS formy AMI, který uživateli umožňuje nakonfigurovat mnoho systémových parametrů, včetně následujících:

- Řízení spotřeby
- Alarmy při spuštění systému
- Parametry CPU
- Časování CPU a paměti

Firmware může být rovněž použit k nastavení parametrů pro různé taktovací frekvence procesoru.



Některé technické parametry hardware a software se mohou měnit bez předchozího upozornění.

Caracteristici

Procesorul

Placa de bază utilizează Intel Pentium 4/Celeron D tip LGA775 care are următoarele caracteristici:

- Acomodează procesoare seria Intel Pentium 4/Celeron D
- Funcționează cu bus sistem (FSB) de 800/533 MHz
- Este compatibilă cu unități centrale dotate cu tehnologia „Hyper-Threading”

Tehnologia „Hyper-Threading” permite sistemului de operare să funcționeze ca și cum ar exista două procesoare, putând fi rulate în paralel două fire, fiecare pe câte un procesor „logic” separat, aflate pe același procesor fizic.

Setul de chipuri

Seturile de chipuri 915GV Northbridge (NB) și ICH6 Southbridge (SB) se bazează pe o arhitectură inovatoare și scalabilă, care s-a impus deja prin fiabilitate și performanță.

- 915GV (NB)**
- Interfață procesor
 - Un procesor Intel Pentium 4 processor sau procesor Intel Celeron D inclusiv pachet 775-Land
 - 533 MT/s (133 MHz) FSB și 800 MT/s (200 MHz)FSB
 - Compatibil cu tehnologie Hyper-Threading (HTTechnology)
 - Inversiune bus dinamică FSB Dynamic Bus Inversion (DBI)
 - Memorie de sistem
 - Una sau două canale de date lățime 64-bit DDR/DDR2 SDRAM (compatibil cu DDR400 sau DDR333, 1 DIMM, numai 2Channels)
 - Lățime de bandă de până la 8.5 GB/s (DDR2 533) în mod dual-channel Interleaved
 - Tehnologii 256-Mb, 512-Mb și 1-Gb DDR/DDR2
 - Dispozitiv grafic integrat (Integrated Graphics Device)
 - Frecvență de bază de 333 MHz
 - Configurare 3D High-Quality și Render Engine
 - Îmbunătățiri de remitere grafică 3D (Graphics Rendering Enhancements)



Setul de chipuri 915GV funcționează doar cu tehnologiile DDR de 256-Mb, 512-Mb și 1-Gb pentru unități de viteză 8x sau 16x. NU suportă tehnologia DDR de 128-Mb. Adică, NU suportă modulele de memorie cu față dublă de 256 MB și cele cu față simplă de 128 MB.

- ICH6 (SB)**
- PCI Express: compatibil 4 PCI Express porturi root și Fully PCI Ex-press 1.0a
 - interfață PCI Bus: compatibil cu PCI Rev 2.3 Specificație la 33MHz
 - Serial ATA Host Controller integrat: patru porturi și rată de transfer date de până la 1.5 Gb/s (150 MB/s)
 - IDE Controller integrat
 - Măsurare de timp a până la două drive-uri
 - Moduri Ultra ATA/100/66/33, BMIDE și PIO
 - Compatibil cu specificație Azalia cu suport pentru 8 canale de output audio
 - USB2.0
 - Include patru UHCI Host Controller, cu suport pentru opt porturi externe

- Include un EHCI Host Controller cu suport pentru toate cele opt porturi
- LAN Controller integrat
 - Compatibil WfM 2.0 și IEEE 802.3
 - Suport Ethernet10/100 Mb/s

Memoria

- Funcționează cu module SDRAM DIMM DDR 533/400 MHz DDR2
- Poate funcționa cu două module DIMM fără zonă tampon
- Poate funcționa cu module DIMM de cel mult 1 GB, iar cantitatea maximă de memorie este de 2 GB

Sloturi de extensie

- Un slot PCI Express Lite pentru interfața grafică
- Un PCI Express x1
- Două sloturi de 32 biți compatibile PCI, versiunea 2.3
- O interfață IDE 40 cu profil plat care poate deservi două unități IDE
- O interfață pentru unitate floppy
- Patru conectoare SATA cu 7 ace

Canale IDE Onboard

- Un canal IDE compatibil cu ATA-66, ATA-100
- Compatibil cu modulele PIO (Programmable Input/Output – Input/Output programabil) și DMA (Direct Memory Access – Acces Memorie Direct)
- Compatibil cu IDE Ultra DMA bus mastering cu rata de transfer de 100/66/33 MB/sec

Serial ATA

- Patru conectoare Serial ATA
- Rata de transfer depășind cel mai bun ATA (~150 MB/s) cu reglabilitate la rate mai mari
- Numărătoare Low pin pentru host și pentru dispozitive

AC'97 Audio CODEC

- corespunde specificațiilor AC'97 Rev2.3
- Corespunde cerințelor de performanță audio pentru sisteme PC99/2001
- Corespunde cerințelor audio Microsoft WHQL/WLP 2.0
- Audio Pozițional HRTF 3D și 10 benzi de Software Equalizer

Porturi I/O Onboard

- Două porturi PS/2, pentru mouse și tastatură
- Un port serial
- Un port paralel
- Un port VGA
- Un port LAN (opțional)
- Patru porturi USB2.0 pe panoul din spate
- Mufe audio pentru microfon, intrare și ieșire audio

Fast Ethernet LAN (opțional)

- integrează Fast Ethernet MAC, cip fizic și emițător-receptor într-un singur cip
- Asigură auto-negociere N-way 100Mbps și 10Mbps
- corespunde standardelor PC99/PC2001 și asigură economie de energie ACPI
- asigură control flux Full Duplex (IEEE 802.3x)

Firmware BIOS

Placa de bază utilizează AMI BIOS, care permite utilizatorului să configureze mai mulți parametri ai sistemului, cum ar fi:

- Gestionarea energiei
- Alarmer de trezire
- Parametri CPU
- Temporizare CPU și memorie

Acest firmware poate fi utilizat și pentru a seta parametrii diferitelor frecvențe de comandă ale procesorului.



Anumite specificații hardware și elemente de software pot fi modificate fără înștiințare prealabilă.

Спецификация

Процесор

Тази дънна платка използва сокет LGA775 за Intel Pentium 4/Celeron D със следните спецификации:

- Поддръжка на процесори Intel Pentium 4/Celeron D
- поддръжка на системна шина със скорост 800/533MHz
- поддръжка на процесори с технология "Hyper-Threading"

Технологията "Hyper-Threading" позволява да се "излъже" операционната система, че работи на два процесора, което дава възможност за паралелното изпълнение на две задачи на два отделни "логически" процесора в един и същ физически процесор.

Чипсет

Чипсетът със северен мост 915GV (NB) и южен мост ICH6 (SB) е изграден на базата на оригинална архитектура с възможност за надстройка с доказана надеждност и производителност.

- 915GV (NB)**
- Процесорен интерфейс
 - Процесор Intel Pentium 4 или Intel Celeron D с 775-Land пакет
 - Процесорна шина (FSB) 533 MT/s (133 MHz) и 800 MT/s (200 MHz)
 - Поддръжка на технологията Hyper-Threading (HT Technology)
 - FSB Dynamic Bus Inversion (DBI)
 - Системна памет
 - Един или два 64-битови DDR/DDR2 SDRAM канали за данни (с поддръжка на DDR400 или DDR333, 1 DIMM, само 2-канални)
 - Скорост на трансфер до 8.5 GB/s (DDR2 533) в дву-канален Interleaved режим
 - Поддръжка на 256-Mb, 512-Mb и 1-Gb DDR/DDR2
 - Интегриран графичен контролер
 - Честота на ядрото 333 MHz
 - Висококачествено графично ядро 3D Setup / Render
 - Подобрено възпроизвеждане на 3D графика



Чипсетът 915GV поддържа само технологиите 256-Mb, 512-Mb and 1-Gb DDR за x8 и x16 устройства, и НЕ поддържа технологията 128-Mb DDR. Това означава, че НЕ могат да се подключат модули 256 MB Double Side Memory Module и 128 MB Single Side Memory Module.

- ICH6 (SB)**
- PCI Express: 4 PCI Express root порта при пълна съвместимост с PCI Ex-press 1.0a
 - Интерфейс на шината PCI: Поддръжка на спецификацията PCI Rev 2.3 при 33MHz
 - Интегриран Serial ATA Host контролер: четири порта със скорост на трансфер до 1.5 Gb/s (150 MB/s)
 - Интегриран IDE контролер
 - Независим тайминг до две устройства
 - режими Ultra ATA/100/66/33, BMIDE и PIO
 - Съвместимост със спецификацията Azalia с поддръжка на 8-канален аудио изход
 - USB2.0
 - Включва четири UHCI Host контролера с поддръжка на осем външни порта
 - Включва един EHCI Host контролер, който поддържа всичките осем порта

Multi-Language Translation

- Интегриран мрежов контролер
 - съвместимост със спецификациите WfM 2.0 и IEEE 802.3
 - поддръжка на режими 10/100 Mb/s Ethernet

Памет

- поддръжка на DDR2 533/400 MHz DDR SDRAM DIMMs
- поддръжка на до два небуферирани DIMM слота
- до 1 GB памет на 1 DIMM канал с максимален капацитет 2 GB

Възможности за разширяване

- един слот PCI Express Lite за графичен интерфейс
- един слот PCI Express x1
- два слота 32-bit PCI v2.3
- един нископрофилен 40-pin IDE колектор с поддръжка на две IDE устройства
- един конектор за флопидисково устройство
- четири конектора 7-pin SATA

Интегрирани IDE канала

- Един IDE канал с поддръжка на ATA-66, ATA-100
- Поддръжка на режими PIO (Programmable Input/Output) и DMA (Direct Memory Access)
- Поддръжка на IDE Ultra DMA със скорост на трансфер 100/66/33 MB/sec

Serial ATA

- Четири Serial ATA конектора
- Скорост на трансфер по-голяма от най-добрата при ATA (~150 MB/s) с възможност за увеличение до по-високи скорости
- Шина Low pin count за контролера и устройствата

AC'97 аудио кодек

- Съвместимост със спецификациите на AC'97 Rev2.3
- Съответствие с изискванията за аудио производителност на системи PC99/2001
- Съответствие с изискванията на Microsoft WHQL/WLP 2.0
- HRTF 3D Аудио и 10-лентов софтуерен еквалайзер

Интегрирани Вход/Изход порта

- два PS/2 порта за мишка и клавиатура
- един сериен порт
- един паралелен порт
- един VGA порт
- един LAN порт (опция)
- Четири порта USB2.0 на задния панел
- Аудио жакове за микрофон, линеен вход и линеен изход

Мрежов контролер Fast Ethernet (опция)

- Интегриран Fast Ethernet MAC контролер и трансивер на един физически чип
- Поддръжка на режими 100Mbps и 10Mbps с N-way автоматично съгласуване
- Съответствие със стандартите PC99/PC2001 и Поддръжка на управление на захранването ACPI
- Поддръжка на Full Duplex Flow Control (IEEE 802.3x)

BIOS Firmware

Дънната платка използва AMI BIOS с възможност за различни системни настройки, включително

- управление на захранването
- Wake-up аларми
- параметри на процесора
- синхронизиране на процесора и паметта

настройка на скоростта на часовника на процесора



Хардуерните и софтуерни спецификации и параметри могат да бъдат изменени без предупреждение.

Jellemző

Processzor

Az alaplap LGA755 típusú Intel Pentium 4/Celeron D használ, amely a következő tulajdonságokkal rendelkezik:

- Kompatibilis Intel Pentium 4/Celeron D sorozat processzorokkal
- 800/533 MHz sebességű rendszerbuszt (FSB) támogat
- Támogatja a „Hyper-Threading” technológiát használó központi egységeket

A „Hyper-Threading” technológia által az operációs rendszer úgy működik, mintha két processzorral rendelkezne, ami két szál párhuzamos futását teszi lehetővé két független, ugyanazon fizikai processzoron található „logikai” processzoron.

Lapkakészlet

A 915GV Northbridge (NB) és ICH6 Southbridge (SB) lapkakészletek egy új és méretezhető, nagy megbízhatóságú és teljesítőképességű architektúrára épülnek.

- 915GV (NB)**
- Processzor interfész
 - Egy Intel Pentium 4 processzor vagy Intel Celeron D processzor 775-Land csomaggal
 - 533 MT/s (133 MHz) FSB és 800 MT/s (200 MHz)FSB
 - Kompatibilis Hyper-Threading Technológiával (HTTechnology)
 - FSB Dinamikus Busz inverzió (Dynamic Bus Inversion - DBI)
 - Rendszermemória
 - Egy vagy két 64-bit széles DDR/DDR2 SDRAM adatcsatorna (kompatibilis DDR400 vagy DDR333-mal, 1 DIMM-mel, csak 2Channels/kétcsatornással)
 - Sávsebesség egészen 8.5 GB/s-ig (DDR2 533), kétcsatornás Interleaved módban
 - 256-Mb, 512-Mb és 1-Gb DDR/DDR2 technológiák
 - Integrált grafikai eszköz
 - Alapfrekvencia 333 MHz
 - High-Quality 3D telepítés és Render Engine
 - 3D grafika renderelő berendezések (Graphics Rendering Enhancements)



A 915GV lapkakészlet csak a 256 Mb-os, 512 Mb-os és 1 Gb-os DDR technológiákat támogatja 8- és 16-szoros eszközök esetében, azaz a 128 Mb-os technológiával NEM kompatibilis. Azaz NEM működik 256 MB-os kétoldali, illetve 128 MB-os egyoldali memóriaegységekkel.

- ICH6 (SB)**
- PCI Express: 4 PCI Express root portok és Teljes PCI Ex-press 1.0a kompatibilis
 - PCI busz interfész: kompatibilis PCI Rev 2.3 specifikációval 33MHz-en
 - Integrált Sorozatos ATA Host Vezérlő: négy port és 1.5 Gb/s (150 MB/s) adatátviteli sebesség
 - Integrált IDE vezérlő
 - Önálló időmérés egészen ét meghajtóig
 - Ultra ATA/100/66/33, BMIDE és PIO módok
 - Kompatibilis 8 csatornás audio kimenettel kompatibilis Azalia specifikációval

Multi-Language Translation

- USB2.0
 - Rendelkezik négy UHCI Host vezérlővel, megfelel nyolc külső portnak
 - Rendelkezik egy EHCI Host vezérlővel, amely megfelel mind a nyolc portnak
- Integrált LAN vezérlő
 - Kompatibilis WfM 2.0 és IEEE 802.3-vel
 - 10/100 Mb/s Ethernet kompatibilitás

Memória

- DDR2 533/400 MHz-es DDR SDRAM DIMM egységekkel működik
- Két puffermentes DIMM egységgel működik
- Maximum 1 GB-os DIMM egységeket támogat, maximális memória 2 GB

Expansion Slots

- Egy PCI Express Lite a grafikus interfész számára
- Egy 1-szeres PCI Express foglalat
- Két 32 bites, a PCI 2.3-as változatával kompatibilis foglalat
- Egy 40 tűs lapos IDE foglalat, amely két IDE eszközt képes kiszolgálni
- Egy hajlékonylemez meghajtó interfész
- Négy 7 tűs SATA csatlakozó

Onboard IDE csatornák

- Egy IDE csatorna, kompatibilis ATA-66, ATA-100-val
- Kompatibilis PIO (Programmable Input/Output – programozható bemenet/kimenet) és DMA (Direct Memory Access – közvetlen memória hozzáférés) módokkal
- Kompatibilis IDE Ultra DMA busz vezérléssel, 100/66/33 MB/sec átviteli sebességgel

Sorozatos ATA

- Négy sorozatos ATA csatlakozó
- Átviteli sebesség meghaladja a legjobb ATA (~150 MB/s) sebességet, felgyorsítható nagyobb sebességre
- Alacsony pin számlálás mind a host, mind a berendezések esetén

AC'97 Audio CODEC

- Megfelel a AC'97 Rev2.3 specifikációknak
- Megfelel a PC99/2001 rendszerek audio-teljesítménnyel szembeni követelményeknek
- Megfelel a Microsoft WHQL/WLP 2.0 audio követelményeinek
- HRTF 3D pozíciós hang és 10 sávú szoftver hangszínszabályozó

Onboard I/O Port

- Két PS/2 port az egér és a billentyűzet számára
- Egy soros port
- Egy párhuzamos port
- Egy VGA port
- Egy LAN port (választható)
- Négy hátsó panel USB2.0 port
- Audio csatlakozók mikrofon, bemenet és kimenet számára

Gyors Ethernet LAN (opcionális)

- Fast Ethernet MAC-et, fizikai csipet és adó-vevőt integrál egyetlen csipbe
- 10Mbps-es és 100Mbps-es N-way saját intézést (auto-negotiation) biztosít
- megfelel a PC99/PC2001 szabványoknak és ACPI energiagazdálkodást biztosít
- Full Duplex forgalomvezérlést biztosít (IEEE 802.3x)

BIOS Firmware

Az alaplapon levő AMI BIOS segítségével a felhasználó a rendszer sok paraméterét állíthatja be, például:

- Energiagazdálkodás
- Ébresztési riasztások
- CPU paraméterek
- CPU és memória időzítés

A firmware segítségével a processzor órajel-frekvenciáinak paramétereit is beállíthatják.



Bizonyos hardverjellemzők és szoftverelemek előzetes bejelentés nélkül módosulhatnak.