Quick User's Guide

Intel *i848P* mainboard
for Intel Socket 478 processor

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1. Specification

Processor Support

- Socket 478 Intel® Pentium® 4 processors up to 3.4GHz with 533/800MHz front Side Bus
- Socket 478 Intel® Celeron® and 3xx series processors up to 3.2GHz with 400/533MHz front Side Bus
- Supports Hyper-Threading Technology

Chipset

- Intel 848P Chipset (848P + ICH5)

Main Memory

- Two 184-pin DDR DIMM sockets for PC2100/PC2700/PC3200 (DDR266/333/400) DIMMs
- Supports up to 2GB memory size

BIOS

- Flash EEPROM with Award BIOS
  - ACPI v2.0 compliant
  - SMBIOS (System Management BIOS) v2.2 compliant

LAN

- Integrates 10/100Mps Fast Ethernet controller with onboard Realtek RTL8100C LAN Chipset

Legacy IO Support

- Winbond W83627HF LPC IO controller with floppy, printer, serial and CIR/SIR interface

Audio

- Six channel audio with analog and digital output using Realtek ALC655 AC'97 CODEC
  - AC'97 v2.3 compliant
  - Supports CD-In, Aux-In and S/PDIF-in/out interface
  - Supports Line-out and Mic-In for front panel
  - Supports automatic "jack-sensing"
  - Rear panel audio jacks configuration:

Audio Jack Color	2 channel	6 channel
Light Blue	Line-in	Rear stereo-out
Lime	Line-out	Front stereo-out
Pink	Mic-in	Center&Subwoofer

Expansion Slots

- One AGP v3.0 compliant slot supporting 1.5v 8X AGP card
- Five PCI v2.2 compliant slots with Bus Master support
- One CNR slot

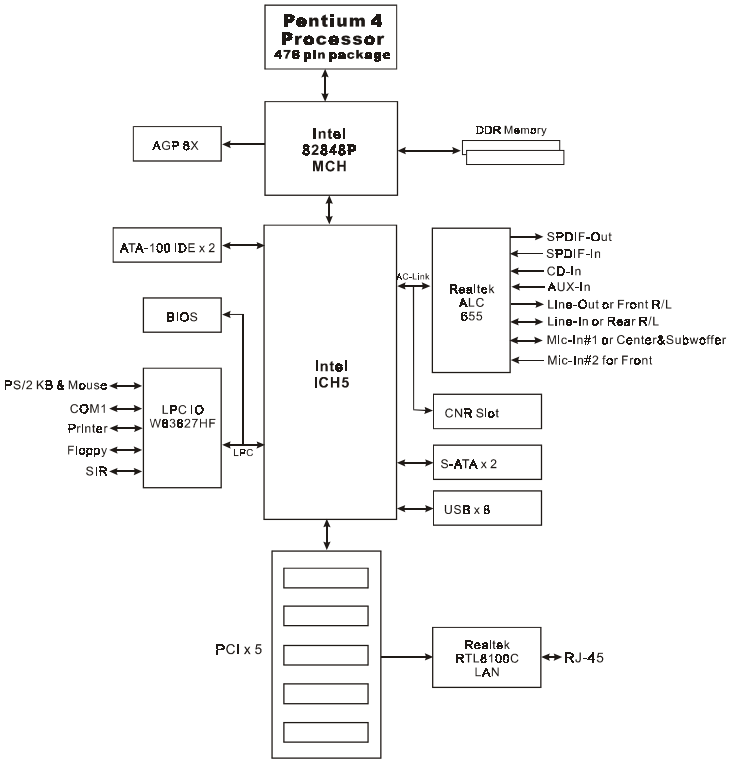
Other Features

- Magic Health – a BIOS H/W monitoring utility for voltage, temperature and fan-speed sensing displayed during POST
- EZ Boot – Simply press "ESC" to select your bootable device. No more hassle to search the BIOS menu, change and re-start
- Supports exclusive KBPO (Keyboard Power On) function

Form Factor

- 305mm x 205 mm ATX size

1.2 Block Diagram



2. Setting up the mainbaord

Before assembling the mainboard into the PC case we recommend you to perform.

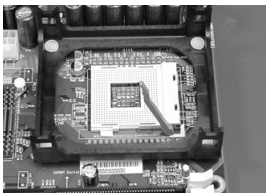
1. CPU Installation
2. DDR Memory Insertion

After the mainboard is fitted into the case, you may

3. Install Add-on VGA or PCI cards
4. Connect the internal cables and wires
5. Connect your external peripherals to the rear I/O port

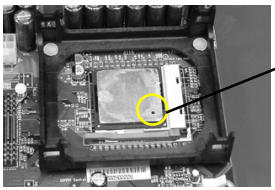
3. Installation

3.1 CPU Installation



Step 1

Open the socket by raising the actuation lever.

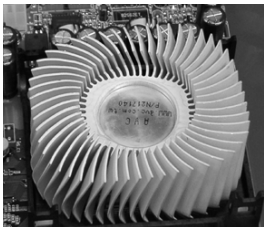


Step 2

a) Align pin 1 on the CPU with pin 1 on the CPU socket as shown above. Insert the CPU and make sure it is fully inserted into the socket.

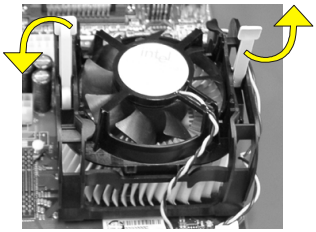
b) Close the socket by lowering and locking the actuation lever.

The CPU is keyed to prevent incorrect insertion, do not force the CPU into the socket. If it does not go in easily, check for mis-orientation.



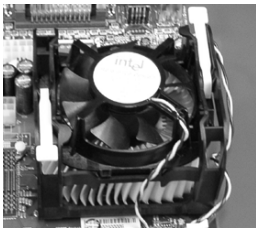
Step 3

Apply thermal compound to the top of the CPU surface and install the heatsink as shown.



Step 4

Install the cooling fan assembly. Press the two clips in the direction shown above to secure its postion.



Step 5

Plug the cooling fan power into the mainboard's CPU fan connector. The installation is complete.

- Installing without a cooling fan will cause CPU overheat and damage the CPU.
- Apply heatsink thermal compound/paste to the CPU.
- Do not install a CPU over 50 times to avoid bending the pins and damaging the CPU.

3.2 DDR Memory Insertion

The mainboard accommodates two PC2100/PC2700/PC3200 184-pin DIMMs (Dual In-line Memory Modules):

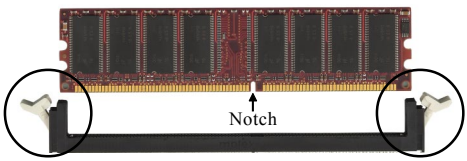
- Supports up to 2.0GB of 266/333/400MHz DDR SDRAM.
- Supports unbuffered non-ECC DIMMs.
- DDR SDRAM supports 64, 128, 256, 512MB and 1GB DIMM modules.
- Supports DRAM configurations defined in the JEDEC DDR DIMM specification.

CPU FSB	Memory supported
400MHz	DDR266
533MHz	DDR266 / DDR333
800MHz	DDR333(320MHz) / DDR400

* With DDR333, adaptive synchronization aligns to the closest FSB to memory clock ratio, setting the memory channel to 320MHz.

❶ To install, align the notch on the DIMM module with the connector.

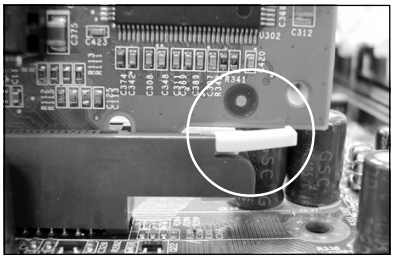
❷ Press straight down as shown in the figure until the white clips close and the module fits tightly into the DIMM socket.



3.3 VGA and PCI card installation

To install a VGA card into the AGP slot or a PCI expansion card:

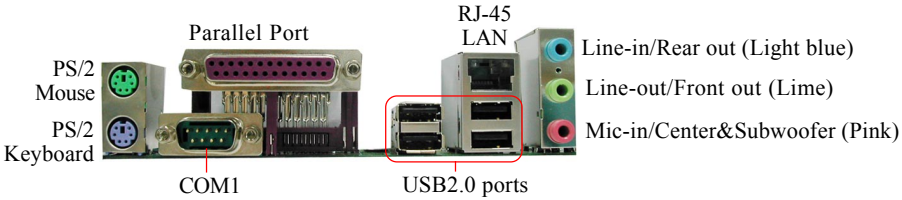
1. Remove the bracket (on the PC case) for the slot you intend to use.
2. Firmly press down the card into the slot until it is completely seated. For an AGP card ensure the AGP slot clicker is locked as shown in the picture below.



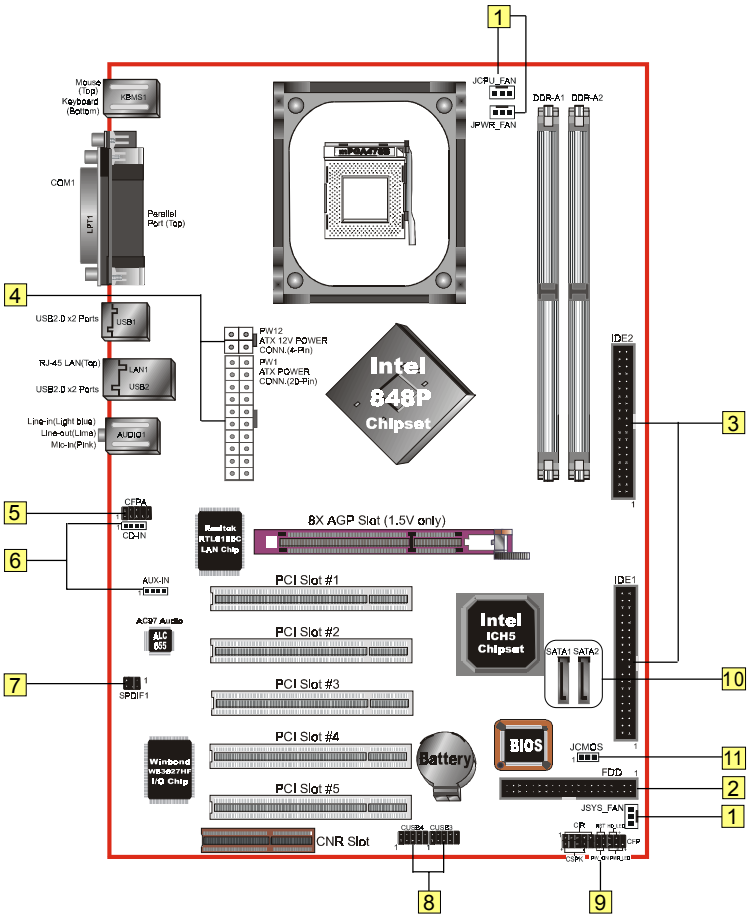
3. Secure the card's bracket to the PC case with a screw.

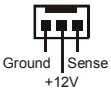
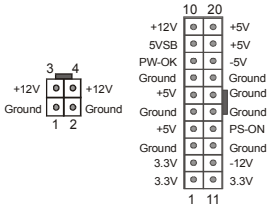
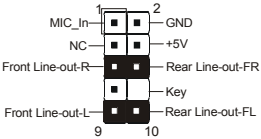
The AGP slot supports only newer VGA cards with 1.5V specifications.

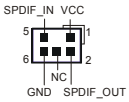
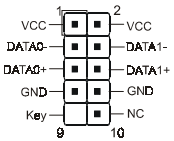
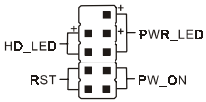
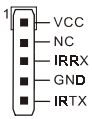
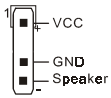
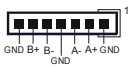
3.4 Rear IO Port



3.5 Internal Connectors



Connectors	Figure	Discriptions
1 JCPU_FAN JPWR_FAN JSYS_FAN		CPU / Power / Chasis Fan Power Connectors JCPU_FAN: The CPU must be kept cool by using a heatsink with fan assembly. JPWR_FAN: Use this connector if you are installing an additional fan in the unit. JSYS_FAN: The chassis fan will provide adequate airflow throughout the chassis to prevent overheating the CPU.
2 FDD		Floppy Drive Connector
3 IDE1 Primary IDE		Primary/Secondary IDE Connector Connects to the IDE device, i.e. HDD and CD-ROM device.
IDE2 Secondary IDE		When using two IDE drives on the same connector, one must be set to Master mode and the other to Slave mode. Refer to your disk drive user's manual for details.
4 PW1 PW12		PW1: 20-pin ATX Power Connector PW12: 4-pin ATX12V Power Connector The plugs of the power cables are designed to fit in only one orientation. The PW1 and PW12 Power Connector must be used simultaneously.
5 CFPA		CFPA: Front Panel Audio Connector This connector is used only if the speaker and microphone needs to be plugged at the front of the PC case. Otherwise, leave the jumpers at the default position.
6 CD-IN AUX-IN		CD-IN/AUX-IN: CD Audio-in connectors These connectors are used to receive audio form a CD-ROM drive, TV tuner or MPEG card.

Connectors	Figure	Discriptions
7 SPDIF		SPDIF: Sony/Philips Digital InterFace connector
8 CUSB3 CUSB4		CUSB3/CUSB4: Four USB2.0 header This mainboard includes 4 additional onboard USB ports. To use these additional USB ports, a USB bracket is required. Please contact your retailer for details.
9 CFP		CFP: Case Front Panel Connector ◆ HD_LED This LED indicates hard drive activity. ◆ PWR_LED Connects to the power indicator on the PC case. ◆ RST Connects to the RESET switch on the PC case. ◆ PW_ON Connects to the Power button on the PC case, to turn on the system. To turn off the system, press the power button for 4 seconds.
CIR		CIR: IR connector For connection to an IrDA receiver unit.
CSPK		CSPK: Speaker Connects to the case's speaker for PC beeps.
10 SATA1 SATA2		SATA1 / SATA2: Two Serial ATA Connectors These connectors enable you to connect Serial ATA devices that conform to the Serial ATA specification.

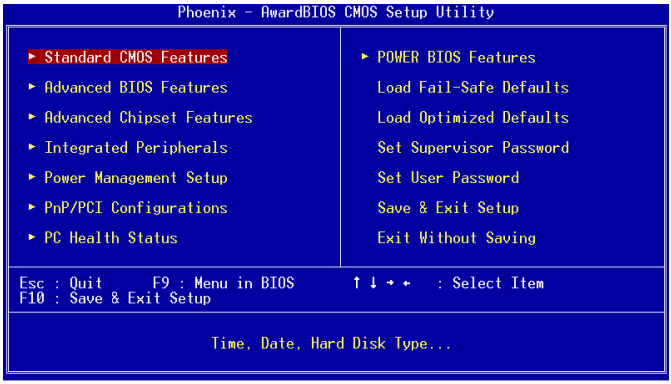
Connectors	Figure	Discriptions
11 JCMOS	 Settings: 1-2: Normal (Default) 2-3: Clear CMOS	JCMOS: Clear CMOS data Jumper This resets the BIOS CMOS data back to the factory default values. Recommend to leave at Normal (default) postion.

English

4. BIOS

BIOS Setup

When you start up the computer for the first time you need to enter the BIOS CMOS Setup Utility. Power on the computer and press <Del> key during POST (Power On Self Test). The BIOS CMOS SETUP UTILITY opens as shown below:



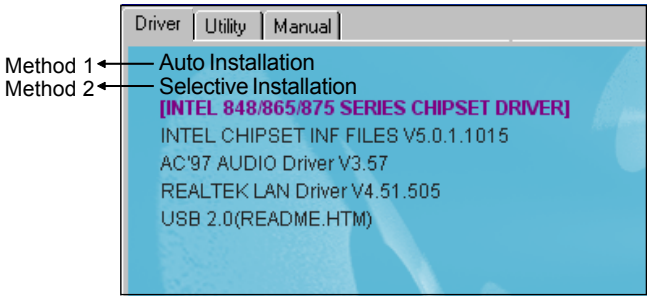
< CMOS Setup Utility>

Select and enter "Load Optimized Defaults" page. This page loads the factory settings for optimal system performance. Follow the simple on-screen instructions to complete this procedure. Press "ESC" to exit and select "Save & Exit Setup" to continue to boot.

Note : For more information regarding BIOS settings refer to the complete manual in the bundled CD.

5. Driver Installation

Once the operating system has been installed, you need to install the drivers for the mainboard.



Insert the bundled CD into the CD-ROM and the main menu screen will appear. The main menu displays links to the supported drivers, utilities and software.

Method 1

This item installs all drivers automatically.

Method 2

This item allows you to install the drivers selectively.

Step 1 : Click **"INTEL CHIPSET INF FILES"** to install chipset driver.

Step 2 : Click **"AC'97 AUDIO DRIVER"** to install audio driver.

Step 3 : Click **"REALTEK LAN DRIVER"** to install LAN driver.

Step 4 : Click **"USB V2.0 DRIVER"** to launch a README.HTM file on how to install USB2.0 driver for Windows 2000/XP.

6. Others

Hyper-Threading

To enable the Hyper-Threading Technology function on your computer system requires ALL of the following platform components:

- ☞**CPU**: An Intel® Pentium® 4 Processor with HT Technology.
- ☞**Chipset**: An Intel® Chipset that supports HT Technology.
- ☞**BIOS**: A BIOS that supports HT Technology and has it enabled.
- ☞**OS**: An operating system that supports HT Technology.

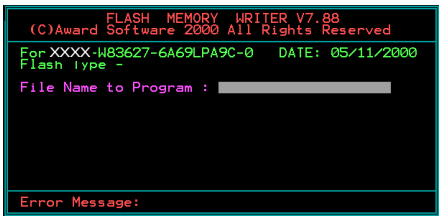
Performance will vary depending on the specific hardware and software you use. See <http://www.intel.com/info/hyperthreading> for information including details on which processor support HT Technology.

7. Update BIOS

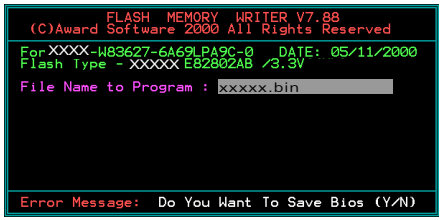
Download the xxxxx.EXE file corresponding to your model from our website to an empty directory on your hard disk or floppy. Run the downloaded xxxxx.EXE file and it will self extract. Copy these extracted files to a bootable floppy disk.

Note: The floppy disk should contain NO device drivers or other programs.

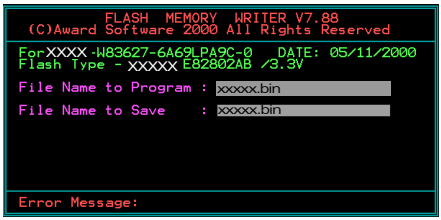
1. Type “A:\AWDFLASH and press <Enter> Key.
2. You will see the following setup screen.
3. Please key in the xxxxx.bin BIOS file name.



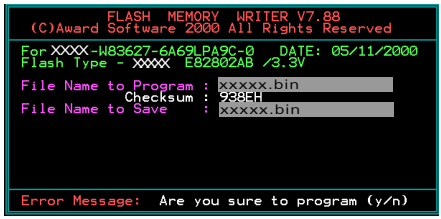
4. If you want to save the previous BIOS data to the diskette, please key in [Y], otherwise please key in [N].



5. Key in File Name to save previous BIOS to file.



6. To confirm and proceed, please key in [Y] to start the programming.



7. The BIOS update is finished.