Chapter 1 Specification

1-1 Mainboard Layout and Components Setup

1-2 Mainboard Specification Table

86PIE/86PIE-L Specifications and Features		
CPU	Socket 478B for P4 CPU (HT CPU included)	
North Bridge	Intel 865PE, supporting 800/533/400MHz FSB	
South Bridge	Intel ICH5	
BIOS	AMI BIOS	
Memory	Supporting Dual-Channel DDR 400/333/266 SDRAM, up to 2GB in 2 DIMM slots	
I/O Chip	W83627HF, with Hardware Monitor	
AGP interface	AGP8X/4X Mode only; 1 AGP Slot on board	
Audio	AC'97 Audio Codec, 6 channel audio	
IDE Interface	2 UATA 66/100 IDE ports	
SATA Interface	2 Serial ATA connectors	
PCI Slots	2 PCI Master slots on board	
I/O Connectors	8 USB2.0 ports, 1 FDD port, 2 COM ports, 1 LPT, 1 IrDA, 1 PS/2 Keyboard, 1 PS/2 Mouse	
Networking	LAN Controller RTL8100B and Connector RJ45 (for 86PIE-L only)	
VGA Display	Not integrated on board	
Other common features	Micro ATX Form Factor, 245mm x 245mm Keyboard/Mouse Wake Up	
Models / Optional Features	86PIE	86PIE-L
LAN Controller on board	No	Yes

1-3 Pentium 4 CPU Installation

This mainboard is built with CPU Socket 478B (478-pin) supporting the Intel Pentium 4 CPU:

- Follow the steps described in this section to install the 478-pin Pentium 4 CPU into the on board Socket 478.
- After installation of Pentium 4 CPU, you must also install the specific Pentium 4 CPU fan designed in tandem with this CPU. This CPU Fan installation is described in next section.
- This mainboard supports Hyper-threading dual-in-one CPU, the function of which can be enabled by Windows XP. (See illustration on the right.)

(If Hyper-threading CPU is installed successfully with O/S Win XP, the O/S will enable the dual-in-one CPU function.)

1. First pull sideways the lever of Socket 478, and then turn it up 90^0 so as to raise the upper layer of the socket from the lower platform.

2. Configure Pin 1 of CPU to Pin 1 of the Socket, just as the way shown in the diagram on the right. Adjust the position of CPU until you can feel all CPU pins get into the socket with ease.

3. Make sure that all CPU pins have completely entered the socket and then lower down the lever to lock up CPU to socket.

1-4 Pentium 4 CPU Fan Installation

1.Press down 4 latches.

2.Press down the 2 levers to lock fan to fanbase

3.Connect Fan Connector to CPU FAN connector

1-5 ATX V 2.03 Power Supply Installation

Warning: Both the Main Power Connector and the +12V Power Connector should be connected to Power Supply; otherwise, the system may either not start or be damaged.

1-6 Jumper Settings

The following diagrams show the locations and settings of jumper blocks on the mainboard.

JKB1: Keyboard / Mouse Wake Up	
1	**1-2 closed (default)** Disabled
1	**2-3 closed** Enabled

JFSB1&JFSB2: CPU Frequency Select				
	CPU Auto-Detect (default)	**100MHz** (400MHz FSB)	**133MHz** (533MHz FSB)	**200MHz** (800MHz FSB)
JFSB1	1	1	1	1
JFSB2	1	1	1	1

Jp3 LAN Controller Select (86PIE-L only)	
1	**1-2 closed (default)** LAN controller enabled
1	**2-3 closed** LAN controller disabled

JBAT1 Clear CMOS	
1	**1-2 closed (default)** To hold data
1	**2-3 closed** To clear CMOS

1-7 Other Connectors Setup

1-7.1 Front Audio Connector

This Mainboard is designed with a Front Panel Audio connector "JAUD1" which provides connection to your chassis.

1. When JAUD1 is set to 5-6 closed and 9-10 closed, this default setting disables this connector and leaves the Back Panel Audio enabled.
2. To use this Front Panel Audio Connector, please open all pins of JAUD1 and connect it to your chassis.

JAUD1: Front Audio Panel Connector

Pin 10 RET L	●—●	Pin 9 FPOUT L
	●	Pin 7 (Key)
Pin 6 RET R	●—●	Pin 5 FPOUT R
Pin 4 Aud Vcc	● ●	Pin 3 Mic VREF
Pin 2 Aud GND	● ●	Pin 1 Mic In

1-7.2 Thermal Detector

1. Detector RT1: A thermal detector is mounted by default to connector RT1 so as to detect the system temperature . What RT12 does is to transmit the thermal signal to Hardware Monitor.

Thermal Detector RT1

RT1 is mounted with Thermal Detector by default for detecting system temperature.

1-7.3 Complex Header (Front Panel Connectors)

(1) Power Switch Connector:

Connection: Connected to a momentary button or switch.

(2) IR Connector (Infrared Connector):

Connection: Connected to Connector IR on board.

(3) HDD LED Connector:

Connection: Connected to HDD LED.

(4) Power LED Connector:

Connection: Connected to System Power LED.

(5) Reset Switch Connector:

Connection: Connected to case-mounted “Reset Switch”.

(6) Speaker Connector:

Connection: Connected to the case-mounted Speaker.

Chapter 2 Software Setup

2-1 To Open up the Support CD

1. Please put the Support CD enclosed in your mainboard package into the CD-ROM drive. In a few seconds, the Main Menu will automatically appear, displaying the contents to be installed for this series:

2. Please install the above drivers listed in the main menu accordingly.

2-2 To Install LAN Drivers (for 86PIE-L only)

2-2.1 RTL8100B LAN driver on Windows 9X

The LAN driver contained in the Support CD is not included in the Autorun Menu. To install RTL8100B LAN driver on Windows 9X, please follow the steps shown below:

1. On the “Start” screen of your system, please click to the following path:

   \My Computer\properties\Device manager

2. In the “Device manager” screen, you can see the item “ PCI Ethernet Controller” with a yellow question mark on its left side, which indicates that the LAN controller is already detected by system but the driver for this on-board RTL8100B Ethernet Controller is not installed yet. Please point to this item with your mouse and double click on it (or click the “Properties” button).
3. Instantly, the “PCI Ethernet Controller Properties“ screen shows up. Please click the “General” bar to continue.
4. In the “General” screen, click “reinstall Driver” button to continue. Please note that the status of “Device Usage” should stay at “Exists in all hardware profiles”.

5. In the “Update device Driver Wizard” screen, click “Next” to continue until you see a dialog box asking you to “Specify a location” for the driver. You should **now** insert the Support CD into your CD-ROM.
6. As illustrated in the picture below, check the item “Specify a location” and click the “Browse” button to find out the correct path for the driver. Supposing your CD-ROM drive is Drive E, please type: E:\Driver\Network\RTL8139\Win98 into the blank bar. (Please note that both RTL8100B and RTL8139C controllers are supported by Driver RTL8139.) Then click the “Next” button to continue.

7. The Update Device Driver Wizard will then go on installing the driver, until the “Insert Disk” dialog box shows up. Please withdraw your Support CD and insert the Windows 98SE CD-ROM into the CD-ROM drive for updating system and click “OK” to continue.
8. The Update Device Driver Wizard will then proceed to update the system with the LAN driver. When the “Finish” screen shows up, click “Finish” to continue.
9. Final Dialog box will appear to remind you that you must restart your computer to finish updating the new hardware. Please click “Yes” to restart system and finish the LAN driver installation.

2-2.2 RTL8100B LAN driver on Windows ME / 2000 / XP

1. When you newly install Windows ME, Windows 2000 or Windows XP, the system will detect the LAN Controller on board and configure it automatically into system. Therefore, users need not bother to install the LAN controller into these operating systems.
2. To verify the existence of RTL8100B Controller and Driver, please enter the “Control Panel” of your system and click “Network” to open the “Configuration” screen. You can then see the “Realtek8139 (A/B/C) PCI Fast Ethernet Adapter” is already installed in your system.

2-3 To Install USB 2.0 Driver for Windows 2000/XP

USB V2.0 with its 480Mb/s transfer rate supports operating system Windows 2000 and Windows XP via the Windows 2000 and Windows XP Service Pack. For archieving Intel USB 2.0 support, users should install the latest Service Pack for Windows 2000 or Windows XP. (intel USB 2.0 does not support Windows 9X/ME.)

1. After installation of Intel Chipset software installation Utility in Windows 2000 or Windows XP, start to install the latest Service Pack version into the operating system. The installation of the latest Service Pack will support USB2.0 in Windows 2000 or Windows XP now.(The latest Service Pack can be found in Microsoft Web Site.)

2. To verify USB2.0 installation, please enter “Device Manager” of “My Computer”. On the “Device Manager” screen, you should be able to see the item “Standard Enhanced PCI to USB Host Controller”, verifying USB2.0 Driver is installed successfully.

Chapter 3 AMI BIOS Setup

3-1 To Update BIOS

- "AMIFLASH.EXE" is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the mainboard. This program only works in ***DOS environment, the utility can not be executed in Windows 95/98, ME, NT, 2000 or Windows XP environment.***

• Please follow the steps below for updating the system BIOS:

Step 1. Please visit the board maker's website, download latest BIOS file and AMI update utility. The file name of AMI update utility will be "AMIXXX.EXE" of which " XXX " stands for the version number of the file. The BIOS file format will be *.ROM, of which " * " stands for the specific BIOS file name.

Step 2. Create a bootable diskette. Then copy the BIOS file and AMI flash utility "AMIXXX.EXE" into the diskette.

Step 3. Insert the diskette into drive A, boot your system from the diskette.

Step 4. Under " A " prompt, type **" AMIXXX.EXE *.ROM "** and then press <Enter> to run BIOS update program. Please note that there should be a space between AMIXXX.EXE and *.ROM. (*.ROM depends on your mainboard model and version code. Instead of typing "*", you should type the specific file name for your specific mainboard).

Step 5. When the message "Flash ROM Update Completed - Pass." appears, please restart your system.

Step 6. You will see a message "CMOS Memory Size Wrong" during booting the system. Press <Del> or <F1> to run CMOS setup utility, then reload "LOAD SETUP DEFAULTS" or **"Load Optimal Defaults"** and save this change.

3-2 BIOS SETUP by CMOS Setup Utility

1. Power on your system.
2. At the initial screen, enter CMOS Setup Utility by pressing < Del > key before POST(Power on Self Test) is complete and the main program screen will appear as follows.

CMOS Setup Utility - Copyright (C) 1985-2002, American Megatrends, Inc.

▶ Standard BIOS Features	Discard Changes and Exit
▶ Advanced BIOS Features	Load Optimal Defaults
▶ Advanced Chipset Features	Discard Changes
▶ PCI/PNP Resource Management	
▶ Boot Configuration Setup	
▶ BIOS Sevurity Features	
Save Changes and Exit	

↑↓←→ : Move Enter : Select +/- : Values F10: Save Esc: Exit F1: General Help F7 : Previous Values F8 : Fail-Safe Defaults F9: Optimize Defaults

Configure Time and Date. Display System Information
...

3. Use the arrow keys on your keyboard to select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <Esc>.
5. In the Main Menu, “Save Changes and Exit” saves your changes and reboots the system, and “Discard Changes and Exit” ignores your changes and exits the program.

- Standard BIOS Features(Times, Date, System Information etc.)
- Advanced BIOS Features (CPU,IDE, Floppy, SuperIO, Hardware Health, ACPI, USB, and Frequency/Voltage Control)
- Advanced Chipset Features (NorthBridge, SouthBridge Configuration)
- PCI/PNP Resource Management (IRQ Settings, Latency Timers etc.)
- Boot Configuration Setup (Boot Settings, Boot Device Priority etc.)
- BIOS Security Features (Supervisor Password, User Password)
- Save Changes and Exit (Exit system setup with saving the changes.)
- Discard Changes and Exit (Exit system setup without saving the changes.)
- Load Optimal Default
- Discard Changes

SL-86PIE / 86PIE-L Quick Installation Guide

Brochage composite Gesamtübersicht Conector de dispositivos Conectores em Pinos
設備連接埠 複合ヘッダ 다목적 콘넥터 التوصيلات الداخلية

1
Interruptor de Força
Interruptor de Energía
System ein/aus Schalter
パワースイッチ
Connecteur du Switch Power On
電源開關
전원 스위치 연결
مفتاح الطاقة الكهربائية

3
HDD LED
HDD LED
HDD LED
HDD LED
Connecteur du témoin d'activité du disque dur
硬碟指示燈
하드 드라이브 LED 연결
مؤشر ضوئي للقرص الصلب الأول

5
Interruptor de Reset
Interruptor de Reset
Neustart Schalter
リセットスイッチ
Connecteur du bouton Reset
系統重設接頭
리셋 스위치 연결
مفتاح إعادة التشغيل

2
Infravermelho (IR)
Conector de infrarrojos
Infrarot
赤外線 (IR)
Connecteur IR (Infrarouge)
紅外線連接頭
자외선 콘넥터(IR) 연결
أشعة تحت الحمراء

4
LED de Força
LED de Energía
Betriebsanzeige
電源 LED
Connecteur du témoin d'alimentation
電源指示燈
전원 LED 연결
مؤشر الطاقة الكهربائية الضوئي

6
Alto-falante
Altavoz
Lautsprecher
スピーカー
Connecteur du haut-parleur
喇叭接頭
스피커 연결
السماعات

Réglage des cavaliers Jumper-Einstellungen Configuración de Jumper Configuração de Jumper
跳線設定 ジャンパーセッティング 점퍼 세팅 إعدادات الجامبر

Effacement du CMOS JBAT1 1-2 Conservation des données (par défaut) 2-3 Effacement du CMOS	*Limpar dados do CMOS* JBAT1 1-2 Reter Dados (Padrão) 2-3 Limpar dados do CMOS	**CMOS データを消却** **JBAT1** **1-2 データを記憶する (デフォールト)** **2-3 CMOS データを消却**
CMOS Daten löschen JBAT1 1-2 Daten erhalten (Standard) 2-3 CMOS Daten löschen	**1** JBAT1 **Clear CMOS** 1 **1-2 To hold data (default)** 1 **2-3 To clear CMOS**	**CMOS 데이타 삭제** **JBAT1** **1-2 원래값 유지 (기본값)** **2-3 현재 CMOS 데이타 삭제**
Borrar el CMOS JBAT1 1-2 Retener Dados (por defecto) 2-3 Borrar el CMOS	**清除 CMOS 功能** **JBAT1** **1-2 記憶資料 (預設值)** **2-3 清除 CMOS 功能**	استعادة الوضع الافتراضي لنظام الدخل والخرج الأساسي JBAT1 1-2 = وضع الحفاظ على المعلومات (افتراضي) 2-3 = استعادة الوضع الافتراضي للمصنع

Sélection du contrôleur LAN
Jp3 (uniquement sur la SL-86PIE-L)
1-2=LAN activé (par défaut)
2-3=LAN désactivé

Seleção de Controladora de Rede
Jp3 (somente SL-86PIE-L)
1-2=Habilitar Rede (padrão)
2-3=Desabilitar Rede

LAN 装置の設定
Jp3 (SL-86PIE-L のみ搭載)
1-2=LAN を使用する場合 (デフォルト)
2-3=LAN を使用しない場合

LAN Controller Ausgewählt
Jp3 (Nur SL-86PIE-L)
1-2=Lan zur verfügung (Standard)
2-3=Lan nicht verfügbar

2 Jp3 **(SL-86PIE-L only) LAN Controller Select**

LAN 콘트롤러 선택
Jp3 (SL-86PIE-L 모델만 해당)
1-2=LAN 사용 (기본값)
2-3=LAN 사용 안함

Selección del LAN Controller
Jp3 (SL-86PIE-L solamente)
1-2=LAN Activado (por defecto)
2-3=LAN Desactivado

LAN 裝置設定
Jp3 (僅供給 SL-86PIE-L)
1-2= 開啟 LAN 功能(預設值)
2-3= 關閉 LAN 功能

الاختيار الخاص ببطاقة الشبكة
Jp3 (فقط للموديل SL-86PIE-L)
2-1 = تفعيل بطاقة الشبكة (افتراضي)
3-2 = إبطال بطاقة الشبكة

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