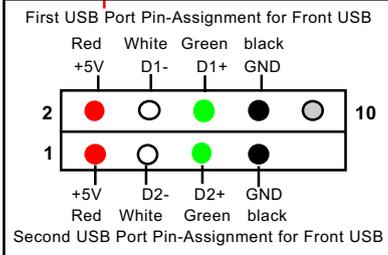
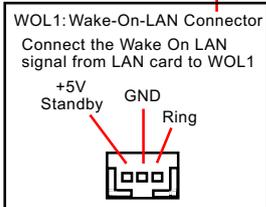
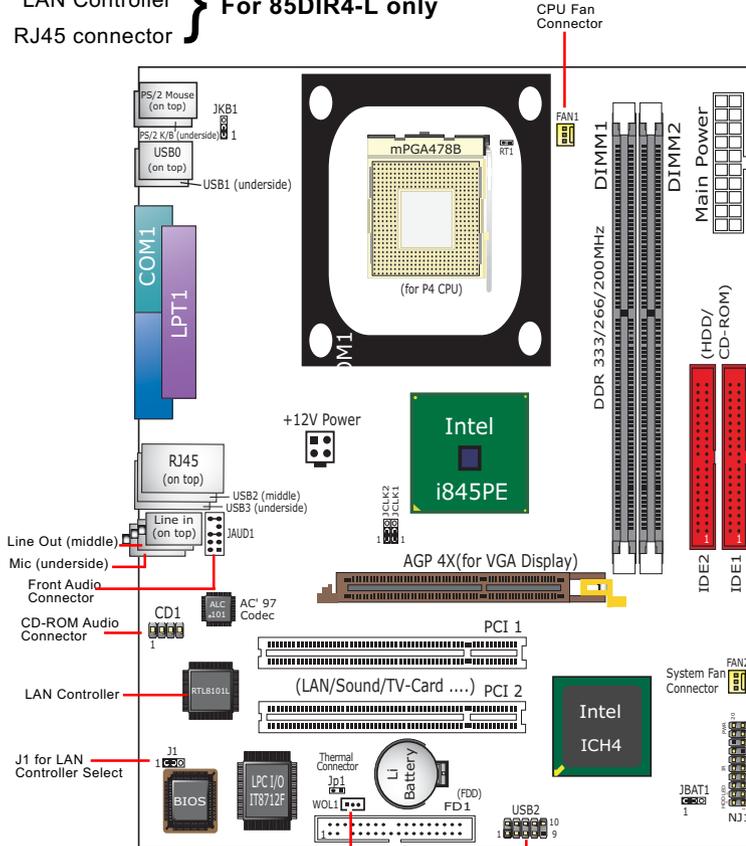


# Chapter 1 Specification

## 1-1 Mainboard Layout and Components Setup

J1  
 LAN Controller } For 85DIR4-L only  
 RJ45 connector }



## 1-2 Mainboard Specification Table

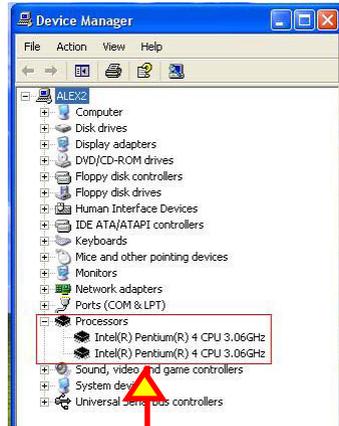
SL-85DIR4 / 85DIR4-L Specifications and Features		
CPU	Socket 478B for Intel P4 CPU (HT CPU included)	
North Bridge	Intel 845PE, supporting *800/533/400MHz FSB	
South Bridge	Intel ICH4	
BIOS	AMI BIOS	
Memory	Supporting DDR 333/266/200 DRAM, up to 2GB in two DDR DIMM slots	
I/O Chip	IT8712F	
AGP interface	AGP4X mode only	
Audio	AC'97 Audio V2.2 compliant, 2-channel audio	
IDE Interface	2 UATA 33/66/100 IDE ports	
Networking	Fast Ethernet Controller, 1 RJ45 (for 85DIR4-L)	
PCI Slots	2 PCI Master slots on board	
I/O Connectors	6 USB ports (V2.0), 1 FDD port, 1 COM port, 1 LPT, 1 IrDA, 1 PS/2 K/B, 1 PS/2 Mouse,	
VGA Display	Not integrated on board	
Other Features	Keyboard/ Mouse Power On/Wake Up ATX 2.03 Power Supply; Micro-ATX form factor	
Optional Features	Models	
		85DIR4
LAN Controller on board	No	Yes

\* Note: FSB 800MHz is supported by Jumper Setting only.

### 1-3 Pentium 4 CPU Installation

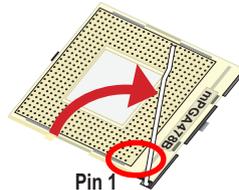
This mainboard is built with CPU Socket 478B ( 478-pin) supporting the Intel Pentium 4 CPU:

- 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.)

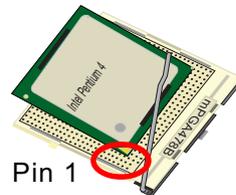


( If Hyper-threading CPU is installed successfully with O/S Win XP, the O/S will enable the dual-in-one CPU function.)

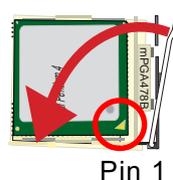
1. First pull sideways the lever of Socket 478, and then turn it up 90° so as to raise the upper layer of the socket from the lower platform.



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.

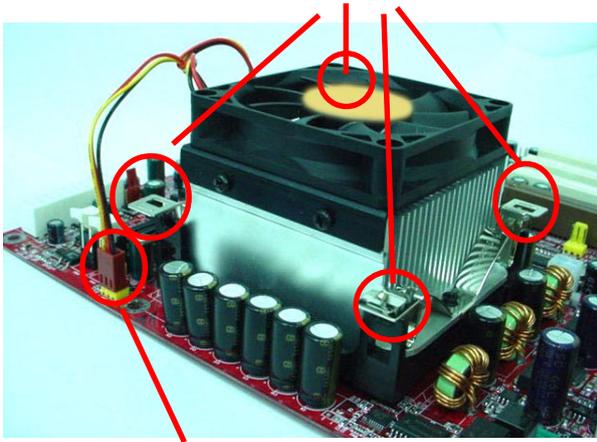


3. Make sure that all CPU pins have completely entered the socket and then lower down the lever to lock up CPU to socket.



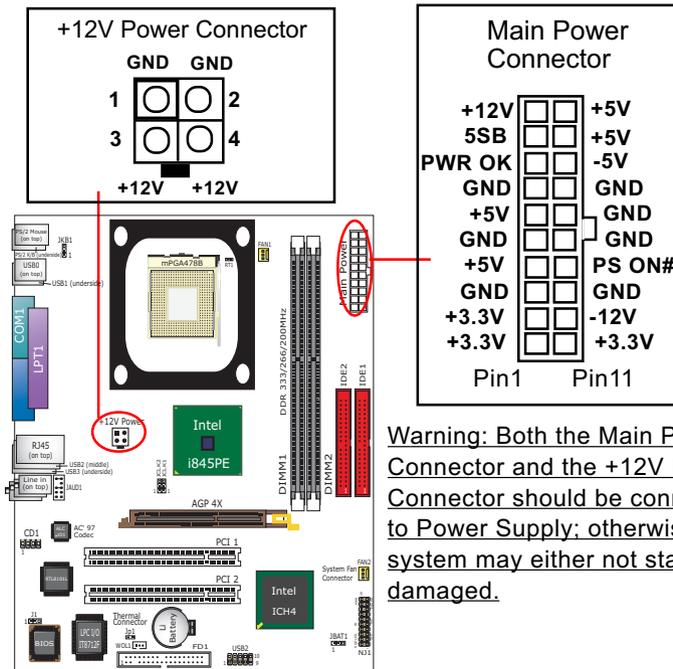
### 1-4 Pentium 4 CPU Fan Installation

Press down 4 corners to lock fan to fanbase



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.

The diagram shows a mainboard with various components labeled: PS/2 Mouse, PS/2 Keyboard, USB0, USB1, COM1, LPT1, RJ45, Line In, USB2, USB3, AUD1, CD1, AC'97 Codec, PCI 1, PCI 2, AGP 4X, Intel i845PE, Intel ICH4, System Fan Connector, Main Power, IDE2, IDE1, DIMM1, DIMM2, DDR 333/266/200MHz, FAN1, FAN2, BIOS, LPC I/O, Thermal Connector, Battery, WOL1, FD1, and NJ1. Red circles highlight the locations of jumpers JKB1, JBAT1, J1, and JCLK1/JCLK2.

<b>JKB1:</b> Keyboard/Mouse Power On / Wake Up	
1	<b>1-2 closed (default)</b> Disabled
1	<b>2-3 closed</b> Enabled

<b>JBAT1</b> Clear CMOS	
1	<b>1-2 closed (default)</b> To hold data
1	<b>2-3 closed</b> To clear CMOS

<b>J1</b> LAN Controller Select (85DIR4-L only)	
1	<b>1-2 closed (default)</b> LAN controller Enabled
1	<b>2-3 closed</b> LAN controller Disabled

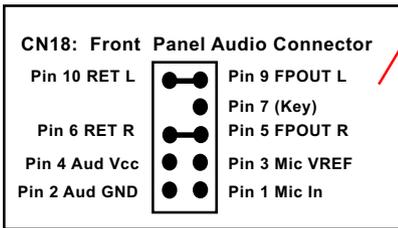
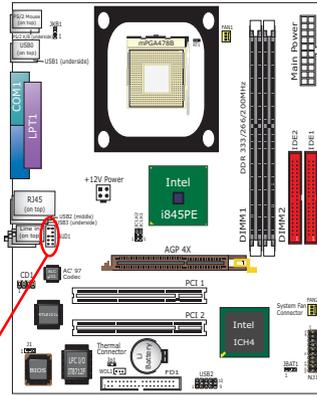
<b>JCLK1&amp;JCLK2: CPU Frequency Select</b>				
(default) CPU Auto- Detection		100MHz	133MHz (FSB533)	200MHz
JCLK2	JCLK1	JCLK2	JCLK1	JCLK2
1	1	1	1	1
1	1	1	1	1

## 1-7 Other Connectors Setup

### 1-7.1 Front Audio Connector

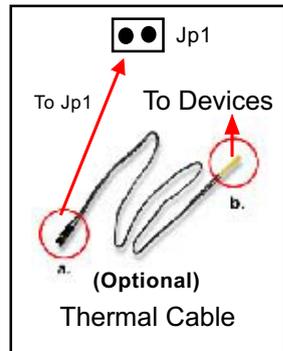
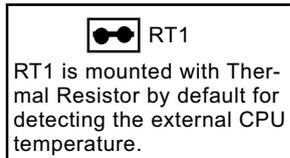
This Mainboard is designed with a Front Panel Audio connector “JAUD1” which provides connection to your chassis.

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.

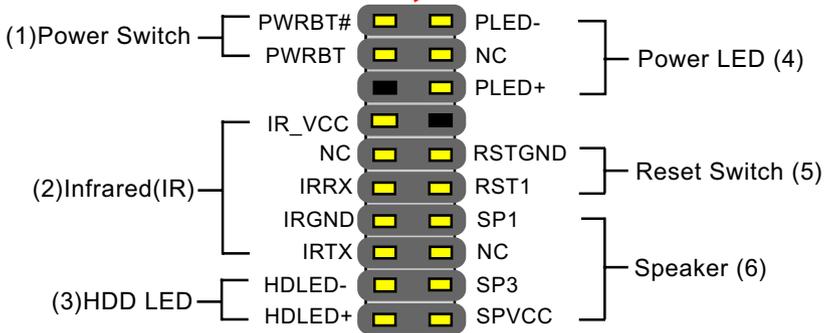
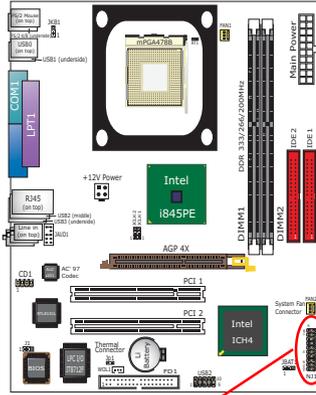


### 1-7.2 Thermal Resistor and Connector

1. Resistor RT1: A thermal resistor is mounted by default to connector RT1 so as to detect the external CPU temperature . What RT1 does is to transmit the thermal signal to Hardware Monitor.
2. Connector Jp1: A thermal cable is needed to connect Jp1 to on-board devices such as HDD, Graphics card etc., so as to detect the temperature generated therein. Please connect the end (a) of the thermal cable to Jp1, and tape another end (b) of thermal cable on to the device which you want to monitor. After you have finished the thermal cable installation, you will **see the detected temperature in BIOS setup or Hardware Monitor utility.**



### 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”.

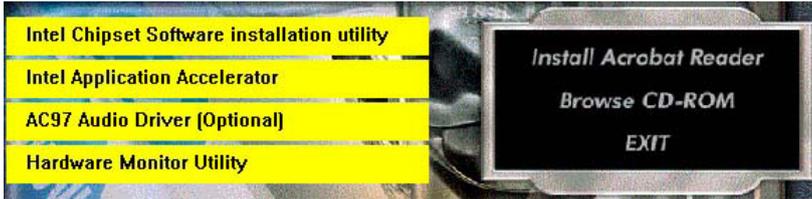
**(6) Speaker Connector:**

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:



## 2-2 To Install LAN Drivers (for 85DIR4-L only)

### 2-2.1 RTL8101L LAN driver on Windows 9X

The LAN driver contained in the Support CD is not included in the Autorun Menu. To install RTL8101L 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 RTL8101L 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 RTL8101L 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.

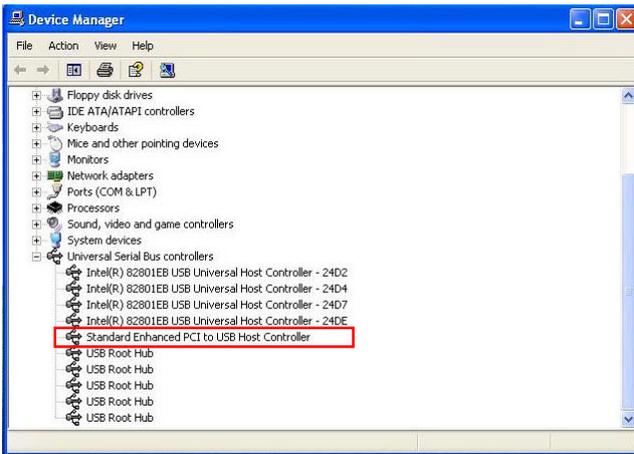
## 2-2.2 RTL8101L LAN driver on Windows ME / 2000 / XP

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 RTL8101L 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.

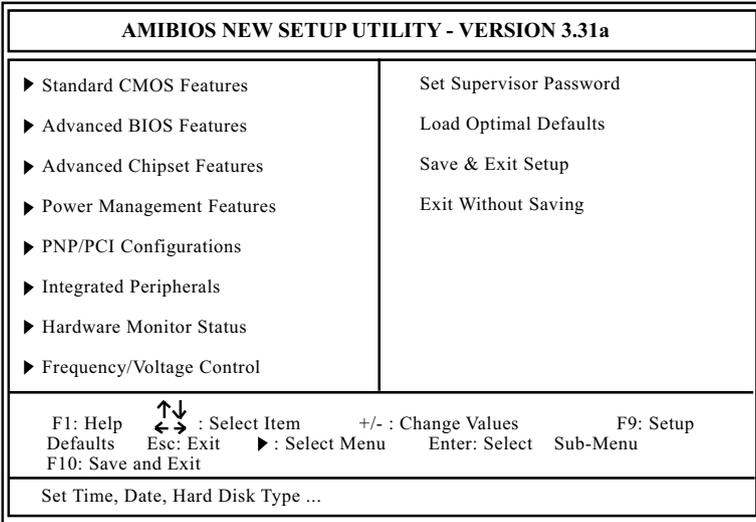
Step 4. Under “A” prompt, type “**AMIXXX.EXE \*.ROM**” and then press <Enter> to run BIOS update program. Please note that there should be a space between AMIXXX.EXE and \*.ROM. (\*.ROM depends on your mainboard model and version code. Instead of typing “\*”, you should type the specific file name for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

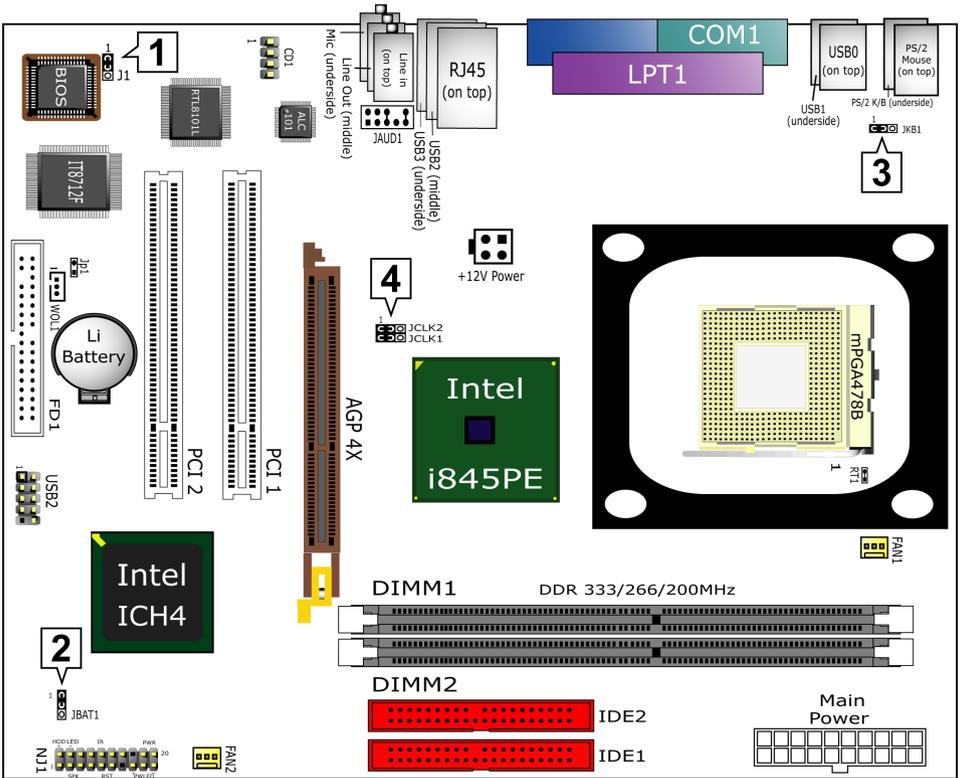


3. Use the arrow keys on your keyboard to select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <Esc>.
5. In the Main Menu, “Save Changes and Exit” saves your changes and reboots the system,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

- Standard CMOS Features(Times, Date, Hard Disk Type etc.)
- Advanced BIOS Features (Virus Protection, Boot Sequence etc.)
- Advanced Chipset Features (AT Clock, DRAM Timing etc.)
- Power Management Features ( Sleep Timer, Suspend Timer etc.)
- PNP/PCI Configurations (IRQ Settings, Latency Timers etc.)
- Integrated Peripherals ( Onboard IO, IRQ, DMA Assign. etc.)
- Hardware Monitor Status (CPU/System Temp., Fan speed etc.)
- Frequency/Voltage (CPU clock, Voltage of CPU, DIMM, AGP etc.)

# SL-85DIR4 / 85DIR4-L Quick Installation Guide

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

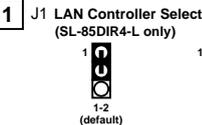


**Sélection du contrôleur LAN**  
 J1 (uniquement sur la SL-85DIR4-L)  
 1-2=LAN activé (par défaut)  
 2-3=LAN désactivé

**LAN Controller Ausgewählt**  
 J1 (Nur SL-85DIR4-L)  
 1-2=Lan zur Verfügung (Standard)  
 2-3=Lan nicht verfügbar

**Selección del LAN Controller**  
 J1 (SL-85DIR4-L solamente)  
 1-2=LAN Activado (por defecto)  
 2-3=LAN Desactivado

**Seleção de Controladora de Rede**  
 J1 (somente SL-85DIR4-L)  
 1-2=Habilitar Rede (padrão)  
 2-3=Desabilitar Rede



**LAN 装置設定**  
 J1 (僅供給 SL-85DIR4-L)  
 1-2=開啓 LAN 功能(預設值)  
 2-3=關閉 LAN 功能

**LAN 装置の設定**  
 J1 (SL-85DIR4-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 컨트롤러 선택**  
 J1 (SL-85DIR4-L 모델만 해당)  
 1-2=LAN 사용 (기본값)  
 2-3=LAN 사용 안함

الاختيار الخاص بطاقة الشبكة  
 (فقط للموديل SL-85DIR4-L)  
 J1  
 2 = تفعيل بطاقة الشبكة (افتراضي)  
 3 = ابطال بطاقة الشبكة

<p><i>Effacement du CMOS</i> JBAT1 1-2 Conservation des données (par défaut) 2-3 Effacement du CMOS</p>	<p><i>Limpar dados do CMOS</i> JBAT1 1-2 Reter Dados (Padrão) 2-3 Limpar dados do CMOS</p>	<p><i>CMOS 데이터를 삭제</i> JBAT1 1-2 데이터를記憶する (デフォルト) 2-3 CMOS 데이터를 삭제</p>
<p><i>CMOS Daten löschen</i> JBAT1 1-2 Daten erhalten (Standard) 2-3 CMOS Daten löschen</p>	<p><b>2</b> JBAT1 Clear CMOS</p> <p>(default)</p>	<p><i>CMOS 데이터 삭제</i> JBAT1 1-2 원래값 유지 (기본값) 2-3 현재 CMOS 데이터 삭제</p>
<p><i>Borrar el CMOS</i> JBAT1 1-2 Retener Datos (por defecto) 2-3 Borrar el CMOS</p>	<p><i>清除 CMOS 功能</i> JBAT1 1-2 記憶資料 (預設值) 2-3 清除 CMOS 功能</p>	<p>استعادة الوضع الافتراضي لنظام الدخل والخرج الأساسي JBAT1 2-1 وضع الحفظ على المعلومات ( افتراضي ) 2-3 استعادة الوضع الافتراضي للمصنع</p>



<p><i>Allumage / Réveil par Clavier /Souris</i> JKB1 1-2=Mis hors service (par défaut) 2-3=Activée</p>	<p><i>Ligar no Teclado/Rato de arranque / acordar</i> JKB1 1-2=Desabilitado (Padrão) 2-3=Habilitado</p>	<p><i>キーボード /マウスからの電源を入れること /ウェイクアップ</i> JKB1 1-2= 設定無効にする (デフォルト) 2-3= 設定有効</p>
<p><i>Tastatur/ Maus Energie ein /Aufwachen</i> JKB1 1-2=Deaktiviert (Standard) 2-3=Aktiviert</p>	<p><b>3</b> JKB1 KB / Mouse Power on / Wake up</p> <p>(default)</p>	<p><i>키보드 /마우스 전원 -온 / 절전모드에서 해제</i> JKB1 1-2= 사용금지 (기본값) 2-3= 사용가능</p>
<p><i>Teclado/Ratón de Energía /Wake up</i> JKB1 1-2=Desactivado (por defecto) 2-3=Activado</p>	<p><i>鍵盤 / 滑鼠 開機 / 喚醒 功能</i> JKB1 1-2= 關閉功能 (預設值) 2-3= 開啓功能</p>	<p>التشغيل عبر اميزة التشغيل لوحة المفاتيح \أقارة JKB1 2-1 غير مفعل (افتراضي) 3-2 مفعل</p>



<p><i>Sélection de la fréquence du CPU</i> JCLK1 &amp; JCLK2 ① Autodétection du CPU (par défaut) ② Pour une fréquence CPU de 100MHz ③ Pour une fréquence CPU de 133MHz ④ Pour une fréquence CPU de 200MHz</p>	<p><i>Seleção de Clock do CPU</i> JCLK1 &amp; JCLK2 ① Detecção automática do CPU (Padão) ② Para 100MHz de Clock do CPU ③ Para 133MHz de Clock do CPU ④ Para 200MHz de Clock do CPU</p>	<p><i>CPU クロック設定</i> JCLK1 &amp; JCLK2 ①はCPU 自動検出設定用 (デフォルト) ②は 100MHz 使用時の設定 ③は 133MHz 使用時の設定 ④は 200MHz 使用時の設定</p>
<p><i>CPU Clock Einstellungen</i> JCLK1 &amp; JCLK2 ① CPU Autodetect (Standard) ② Fur 100MHz CPU Clock ③ Fur 133MHz CPU Clock ④ Fur 200MHz CPU Clock</p>	<p><b>4</b> JCLK1 &amp; JCLK2 CPU Clock Select</p> <p>(default)</p>	<p><i>CPU 클럭 선택법</i> JCLK1 &amp; JCLK2 ① CPU 클럭 자동 선택 (기본값) ② 100MHz CPU 클럭 선택 ③ 133MHz CPU 클럭 선택 ④ 200MHz CPU 클럭 선택</p>
<p><i>Selección de Clock del CPU</i> JCLK1 &amp; JCLK2 ① CPU Autodetect (por defecto) ② Para 100MHz CPU Clock ③ Para 133MHz CPU Clock ④ Para 200MHz CPU Clock</p>	<p><i>CPU 頻率設定</i> JCLK1 &amp; JCLK2 ① CPU 自動偵測 (預設值) ② 選擇 100MHz CPU 頻率 ③ 選擇 133MHz CPU 頻率 ④ 選擇 200MHz CPU 頻率</p>	<p>JCLK1 &amp; JCLK2 الوصلات لاختيار سرعة تردد ناقل المعالج ① اختيار تلقائي للسرعة (افتراضي) ② للسرعة 100 MHz للناقل ③ للسرعة 133 MHz للناقل ④ للسرعة 200 MHz للناقل</p>