

## **ITEM CHECKUP**

---

- ☒ Mainboard
- ☒ Support CD
- ☒ Bundled Bonus Pack CD
- ☒ Bundled Bonus Pack Manual
- ☐ Temperature Sensor Cable (optional)
- ☒ ATA66/100/133 IDE Cable
- ☒ FDD Cable
- ☒ User's Manual
- ☐ RS232 Cable (optional)
- ☐ USB Cable (optional)

# **Chapter 1 Specification**

## **Introduction**

This mainboard features an integration of the powerful processor Intel Pentium 4 and the single-chip North Bridge Intel 845G. The Intel P4 processor is a rapid execution engine providing 533/400MHz system bus, while North Bridge Intel 845G is a high performance integrated chipset providing processor interface, DDR266/200 SDRAM memory interface, Hub interface, AGP interface as well as an integrated Graphics device with CRT display port.

Integrated with i845G, South Bridge Intel ICH4 supports the LPC Super I/O, upstream Hub interface, PCI interface, IDE interface, LAN interface, USB interface, AC'97 Audio interface and the interrupt control. This chapter is to introduce to users every advanced function of this high performance integration.

**Topics included in this chapter are:**

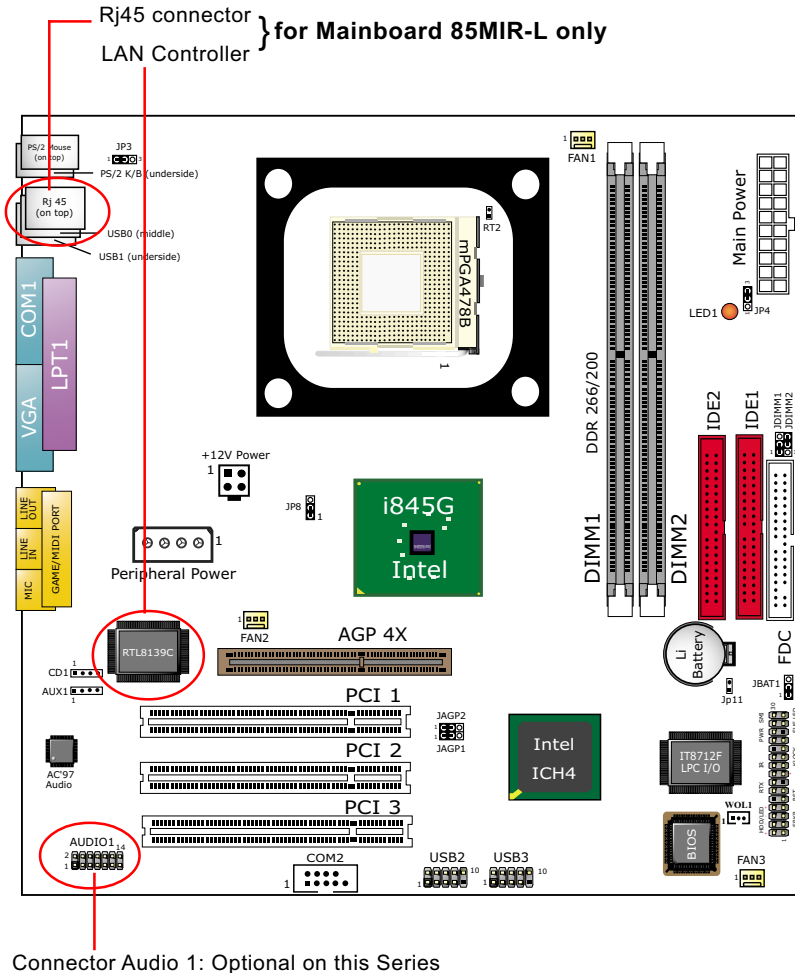
**1-1 Mainboard Components Locations**

**1-2 Mainboard Specifications**

**1-3 Mainboard Specifications Table**

**1-4 Chipset Diagram**

## 1-1 SL-85MIR / 85MIR-L Components Locations



## **1-2 Mainboard Specifications**

### **1-2.1 CPU Socket**

CPU Socket 478 on board, supporting Intel® Pentium 4 processors in 478-pin package for :

- 533/400MHz System Bus;
- Hyper-pipelined technology;
- Advanced dynamic execution;
- Advanced transfer cache;

### **1-2.2 System Chipsets**

North Bridge Intel 845G plus South Bridge Intel ICH4 working with Intel Pentium 4 Processor for managing and arbitrating operations between system interfaces:

### **1-2.3 Memory**

2 DDR DIMM 184-pin slots on board for DDR 266/200 SDRAMs :

- Supporting unregistered, non-ECC DDR266/200 SDRAM up to 2 GBs
- Supporting installation of mixed volumes yet same type of DDR SDRAM modules
- No support for double-sided x16 DDR DIMMs

### **1-2.4 AMI BIOS**

- Supporting Plug & Play V1.0
- Flash Memory for easy upgrade
- Supporting BIOS Writing Protection and Year 2000 compliant
- Supporting BIOS Setup (See Chapter 4 BIOS Setup)

### **1-2.5 Accelerated Graphics Port (AGP) Interface**

AGP Controller embedded on board, supporting:

- 1.5V(4X) power mode only
- 4x AD and SBA signaling, AGP pipelined split-transaction longburst transfers up to 1GB/sec.
- AGP 4X only, AGP v2.0 compliant

### **1-2.6 VGA on board**

- Built-in VGA Graphics Controller in i845G, supporting one 15-pin connector on board for CRT 2D, 3D VGA display
- VGA display to be safeguarded by jumper setting (see Jumper Setting section for VGA select)
- VGA Driver enclosed in Support CD for user's installation

### **1-2.7 Advanced System Power Management:**

- ACPI 1.0B compliant (Advanced Configuration and Power Interface)
- APM V1.2 compliant (Legacy Power Management)
- ACPI POS (Power On Suspend) ;
- PS/2 Keyboard & Mouse Power On
- Supporting Wake-on-LAN (ring signal) through WOL1 connector
- Real Time Clock (RTC) with date alarm, month alarm, and century field

### **1-2.8 Multi-I/O Functions :**

- PCI EIDE Controller, supporting:
  - 2x Ultra ATA100 / 66 / 33 IDE connectors supporting up to 4 IDE devices
- Dedicated IR Functions:
  - Third serial port dedicated to IR function either through the two complete serial ports or the third dedicated port Infrared-IrDA (HPSIR) and ASK (Amplitude Shift Keyed) IR
- Multi-mode parallel data transfer:
  - Standard mode, high speed mode ECP and enhanced mode EPP
- Floppy Disk connector:
  - One FDD connector supporting 2 floppy drives with drive swap support
- Universal Serial Bus Transfer Mode:
  - USB V2.0 compliant; 480Mb/s USB Bus, supporting Win 2000 or later operating system
  - USB drivers provided in Support CD for installation
  - 2 built-in USB connectors and 2 USB Headers (USB2, USB3) which require 2 optional USB cables to provide 4 more optional USB ports
- PS/2 Keyboard and PS/2 Mouse
- UARTs (Universal Asynchronous Receiver / Transmitter):
  - Two complete serial ports (COM1 & COM2) on board

### **1-2.9 Expansion Slots**

- 3 PCI bus Master slots
- 1 AGP 4X slot
- 2 DDR DIMM slots

### **1-2.10 LAN (Local Area Network) on board (85MIR-L only)**

PCI local bus single-chip Fast Ethernet Controller RTL8139C on board:

- Supporting 10/100Mb data transfer
- Supporting Wake On LAN function through the on-board Rj45 LAN Connector
- LAN Controller Driver enclosed in Support CD for user's installation

### **1-2.11 Hardware Monitor on board**

- Winbond Hardware Monitor in W83627HF, providing monitoring and alarm for flexible desktop management of hardware voltage, temperatures and fan speeds.
- Utility Software Winbond HWDDoctor for displaying Monitoring status is enclosed in Support CD for user's installation.

### **1-2.12 AC'97 Audio Codec on board**

AC'97 Audio Codec 2.2 compliant on board

- Supporting up to 6 channels of PCM audio output
- 6 channel audio consists of Front Left, Front Right, Back Left, Back Right, Center and Woofer for complete surround sound effect
- AC'97 Audio Codec Driver enclosed in Support CD for user's installation.

### **1-2.13 6-channel Audio-out Support (optional)**

- This series is designed with an optional 6-channel Audio-out connector "Audio1". If this option is chosen, it will provide 3 additional audio-out ports for the 6-channel sound.

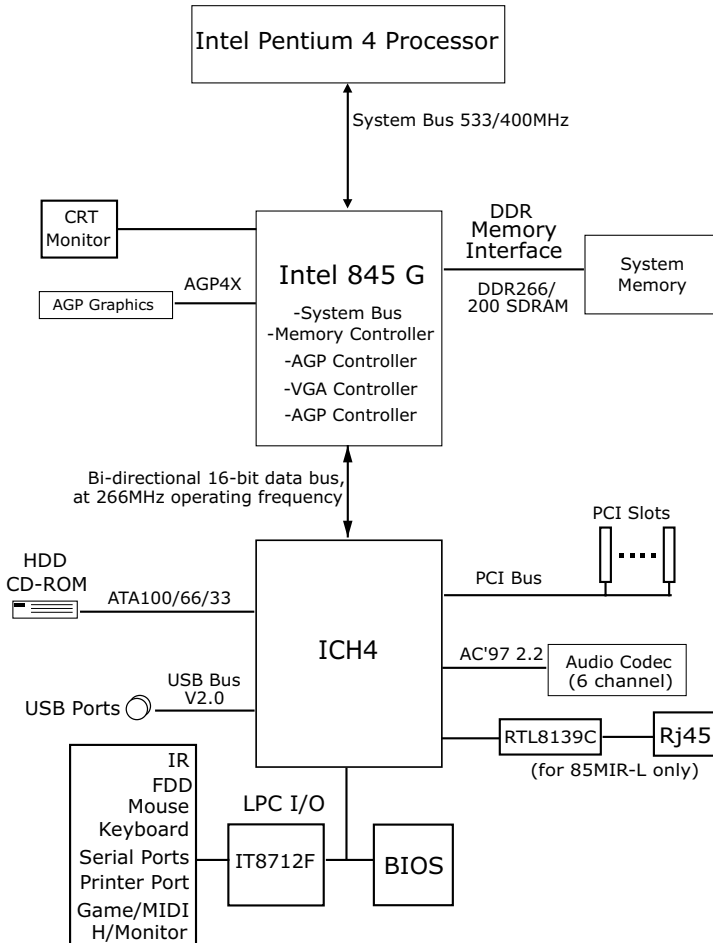
### **1-2.14 Form Factor**

- Micro-ATX form factor, ATX power supply, version 2.03 compliant, supported by one Main Power Connector, one +12V Power Connector and one Peripheral Power Connector
- Mainboard size: 245mm x 245mm

**1-3 Mainboard Specification Table**

<b>SL-85MIR / 85MIR-L Specifications and Features</b>	
CPU	Socket 478B for Intel Pentium 4 CPUs
North Bridge	Intel 845G, supporting 533/400MHz System Bus
South Bridge	Intel ICH4
BIOS	AMI BIOS
Memory	Supporting DDR 266/200 SDRAM, up to 2GB in two DDR DIMM slots
I/O Chip	IT8712F
AGP interface	AGP4X mode only
Audio	AC'97 Audio V2.2 compliant, 6-channel audio
IDE Interface	2 UATA 33/66/100 IDE ports
Networking	Fast Ethernet Controller, 1xRj45 on board
PCI Slots	3 PCI Master slots on board
I/O Connectors	6xUSB ports (V2.0), 1xFDD port, 2xCOM ports, 1xLPT, 1xIrDA, 1xPS/2 K/B, 1xPS/2 Mouse,
VGA Display	1 x VGA connector on board for CRT VGA display
Other Features	BIOS Writing Protection; Hardware Monitoring in IT8712F Keyboard Power On; ATX 2.03 Power Supply; Micro-ATX form factor

## 1-4 Chipset System Block Diagram



**Pentium 4 + Intel 845G + Intel ICH4 Diagram**