

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 845GL. The Intel P4 processor is a rapid execution engine providing 400MHz system bus, while North Bridge Intel 845GL is a high performance integrated chipset providing processor interface, DDR266/200 SDRAM memory interface, Hub interface, AGP interface for DVO as well as an integrated VGA Graphics supported by a CRT display connector.

Integrated with i845GL, South Bridge Intel ICH4 supports 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:

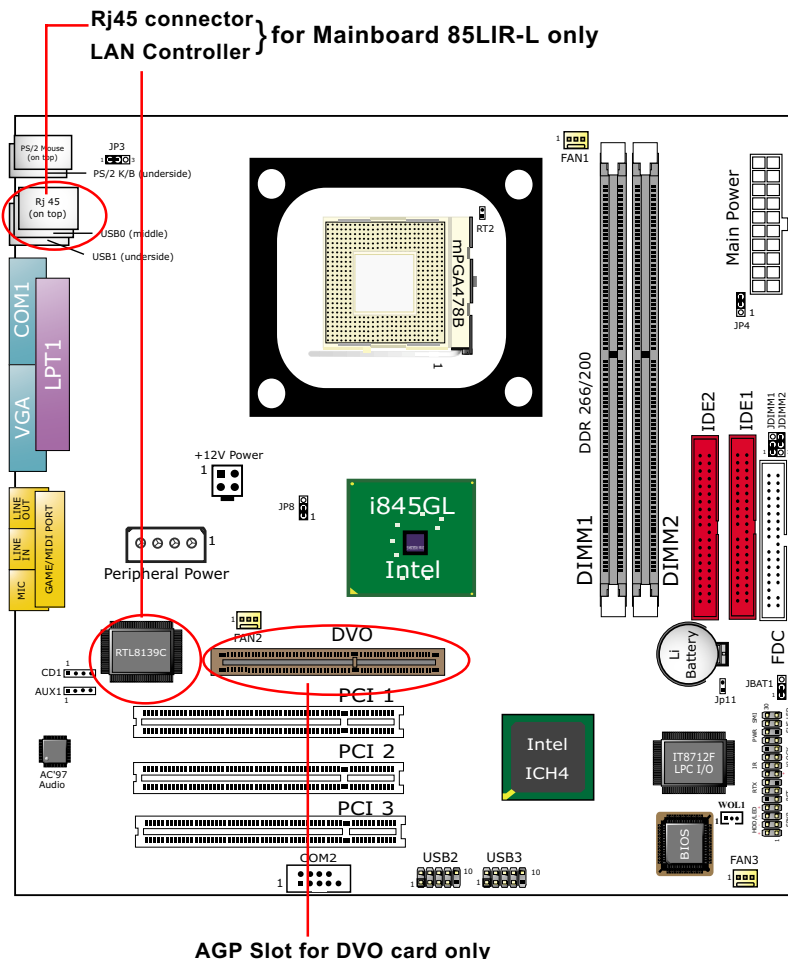
1-1 Mainboard Components Locations

1-2 Mainboard Specifications

1-3 Mainboard Specifications Table

1-4 Chipset Diagram

1-1 SL-85LIR / 85LIR-L Components Locations



1-2 Mainboard Specifications

1-2.1 CPU Socket

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

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

1-2.2 System Chipsets

- North Bridge Intel 845GL: a high performance integrated chipset providing 400MHz System Bus, DDR266/200 SDRAM memory interface, Hub interface, integrated VGA interface with a CRT display connector.
- South Bridge Intel ICH4 supports LPC Super I/O, upstream Hub interface, PCI interface, IDE interface, LAN interface, USB interface, AC'97 Audio interface and the interrupt control.

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 Integrated VGA Interface Supported by VGA Connector

- one 1.5V 15-pin connector on board
- Integrated 2D/3D graphics accelerator
- Hardware motion compensation assist for software MPEG/DVD decode
- VGA Driver enclosed in Support CD for user's installation

1-2.6 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) ; no support for Suspend To RAM (STR)
- 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

1-2.7 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

1-2.8 Expansion Slots

- 3 PCI bus Master slots
- 2 DDR DIMM slots

1-2.9 LAN (Local Area Network) on board (85LIR-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

1-2.10 Hardware Monitor on board

- Hardware Monitor in chip IT8712F, providing monitoring and alarm for flexible desktop management of hardware voltage, temperatures and fan speeds.
- HWDoctor utility "Smartguardian" for displaying Monitoring status is enclosed in Support CD for user's installation.

1-2.11 AC'97 Audio Codec on board

AC'97 Audio Codec 2.1 compliant on board

- Avance AC97 Audio Codec on board, AC'97 2.1 compatible stereo audio code for PC multimedia systems.
- AC'97 Audio Codec Driver in Support CD for user's installation.

1-2.12 AGP Slot for Digital Video Out (DVO)

- This series is designed with an AGP Slot which is typically designed for Digital-Video-Out (DVO) display only. If this option is chosen on board, user can use a DVO card for digital display but an AGP card will not work on this series.

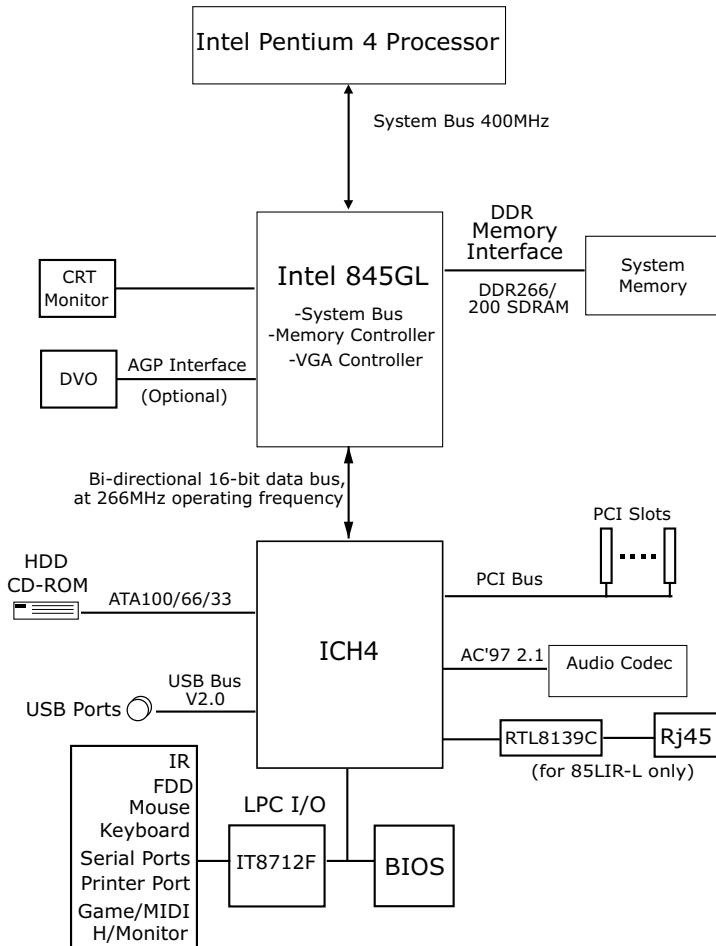
1-2.13 Form Factor

- 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

SL-85LIR / 85LIR-L Specifications and Features	
CPU	Socket 478B for Intel Pentium 4 CPUs
North Bridge	Intel 845GL, supporting 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 Slot	No
Audio	AC'97 Audio V2.1 compliant
IDE Interface	2 UATA 33/66/100 IDE ports
Networking	Fast Ethernet Controller, 1xRj45 (85LIR-L only)
PCI Slots	3 PCI Master slots on board
I/O Connectors	3xUSB 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 845GL + Intel ICH4 Diagram