

Chapter 2

MAINBOARD INTRODUCTION

The MS-6351 Micro LPX mainboard is a high-performance all-in-one computer mainboard based on Intel® 815 chipset. The MS-6351 is designed for the Intel® Celeron™ processor/Pentium III(FC-PGA) processor for inexpensive business/personal desktop markets.

The Intel® 815 chipset integrates a Display Cache SDRAM controller that supports a 32-bit 133MHz SDRAM array for enhanced integrated 3D graphics performance. It is a highly-flexible chipset which is designed to extend the basic graphics/multimedia PC platform up to the mainstream performance desktop platform.

The Intel® 815 chipset implements the host address, control, and data bus interfaces within a single device, it takes advantage of the pipelined addressing capability of the processor to improve the overall system performance. In addition, the chipset also integrates a system memory controller that supports a 64-bit 100/133 MHz SDRAM array.

The Intel® 82801BA (ICH2) chipset is a highly integrated multifunctional I/O Controller Hub that provides the interface to the PCI Bus and integrates many of the functions needed in today's PC platforms. It communicates with the host controller over a dedicated hub interface and provides added flexibility in designing cost-effective system solutions.

2.1 Mainboard Features

CPU

- Support Socket370 for Intel® Celeron™/Pentium III(FC-PGA) processor.
- Support 500MHz, 550MHz, 600MHz, 633MHz, 667MHz and up to 866MHz

Chipset

- Intel® Solano chipset. (544 BGA)
 - Support PC100/133 memory bus
 - Support 66/100/133MHz FSB
- Intel® ICH2 chipset. (241 BGA)
 - AC'97 Controller Integrated
 - 2 full IDE channels, up to ATA100
 - Low pin count interface for SIO
 - Integrated 10/100Mbps Ethernet Controller
 - 2 Host USB controller, up to 4 USB ports

Main Memory

- Support two 168-pin DIMM sockets.
- Support a 32 to 512MB using 16/64/128/256Mbit technology.

Slots

- One 32-bit PCI Bus riser slot. (Extend to two PCI slots)
- Supports 3.3v/5v PCI bus Interface.

On-Board IDE

- An IDE controller on the ICH2 chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA 66/100 operation modes.
- Can connect up to four IDE devices.

Video

- Solano Chip Integrated
- 2D/3D Graphics

Audio

- ICH2 Chip Integrated
- AC'97 2.1 Compliant

Network

- Intel 82562 EM Platform LAN connect for 10Base-T and 100Base-TX
 - support basic AOL function (Alert on LAN)
- ICH2 chip integrated the 10/100Mbps Ethernet Controller

TV-Out

- Chromtel CH7007
 - support S-Out/AV-Out

1394 Controller

- 1394 PHY Controller
 - TI TSB41LV02 PHY Digital-to-Analog Transceiver
 - Support up to two 1394/1394A V2.0 compatible data channels
- 1394 Link Layer Controller
 - TI TSB12LV26 1394 Link Layer Host Controller
 - IEEE 1394, 1394 OHCI V1.0 & 1394A V2.0 compatible
 - Supports 100/200/400 Mbps High Throughput
 - 3.3V & 5V Operation for PCI-to 1394 Interface

On-Board Peripherals

- On-Board Peripherals include:
 - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
 - 1 serial port header (COM1) connected to rear COM port
 - 1 parallel port supports SPP/EPP/ECP mode
 - 2 USB rear port with 1 USB header for front side 2 USB ports
 - 1 IrDA connector for SIR.
 - 1 VGA port
 - 1 S-VIDEO for Video Output
 - 1 AV-composite jacks for video output
 - 1 Audio Port for Rear Panel
 - 3 Audio ports for Front Panel
 - 1 RJ45 LAN port
 - 2 IEEE 1394 ports

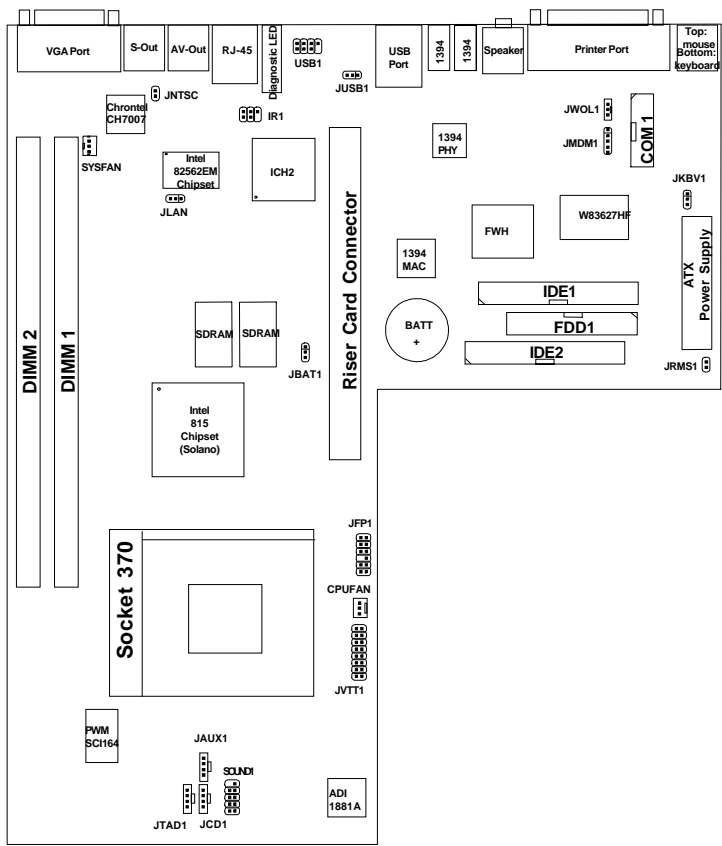
BIOS

- The mainboard BIOS provides “Plug & Play” BIOS which detects the peripheral devices and expansion cards of the board automatically.
- The mainboard provides a Desktop Management Interface(DMI) function which records your mainboard specifications.

Mounting

- 3 mounting holes.

2.2 Mainboard Layout



MS-6351 MICRO LPX Mainboard