

Chapter 1

INTRODUCTION

The PCI Pentium®II NA7 PCI/ISA mainboard is a high-performance personal computer mainboard based on the Pentium®II processor. The Pentium®II CPU supports MMX™(Multimedia Extension) technology.

The mainboard utilizes the Intel®82440FX PCI Chipset which has high integration and provides all system control functions. In addition there is an on-chipset USB and IDE controller which supports IDE PIO/Bus master operation mode for IDE HDD/CD-ROM. The PIO mode supports Mode 0,1,2,3 and 4, with a transfer rate up to 22 MB per/sec. It also supports the Modem Ring wake-up functions, voltage and thermal detect.

1.1 Mainboard Features

CPU

- Two Slot 1 for Dual Pentium®II Processor .
- Supports 233MHz, 266MHz and higher.
- Core/Bus ratios are x3.5, x4, x4.5, and higher.

Cache Memory

- Internal Level 1 Cache: 16KB instruction code and 16KB data cache.
- Internal Level 2 Cache: 256KB/512KB (depending on CPU)

VRM

- Two VRM(Voltage Regulator Module) is on board. It provides power for the processor.

Chip Set

- Intel®82440FX PCI Chipset.

Clock Generator

- 60MHZ/66.6MHz clocks are supported. Both meet Pentium®II processor and NATOMA(82440FX) Chipset specifications.

Main Memory

- Supports eight memory banks using four 168-pin unbuffered DIMM sockets.
- Up to 1 GB main memory.
- Supports symmetric or asymmetric memory with ECC(Error Check Correct) function.
- Supports Fast Page (FP) Mode and Extended Data Output (EDO) Mode.

Note: **BEDO** and **SDRAM** are not supported.

Slots

- Five 32-bit Master PCI Bus slots and Three 16-bit ISA bus slots. One shared slot that can be used as ISA or PCI.

On-Board Peripherals

- On-Board Peripherals include:
 - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
 - 2 serial ports (COMA + COMB)
 - 1 parallel port supports SPP/EPP/ECP mode
 - 1 IrDA connector or Fast IrDA(reserved).

On-Board IDE

- An IDE controller on the Intel®821371SB PCI Chipset provides IDE HDD/CD-ROM with PIO and Bus Master Operation Mode. The PIO Mode supports modes 0, 1, 2, 3 and 4 with a transfer rate of 22 Mbytes per second.

On-Board USB

- Supports dual port USB(Universal Serial Bus).

BIOS

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

RTC

- Non-Volatile RTC with 114 bytes of CMOS RAM.

Keyboard Connector

- PS/2 keyboard interface and PS/2 mouse interface.

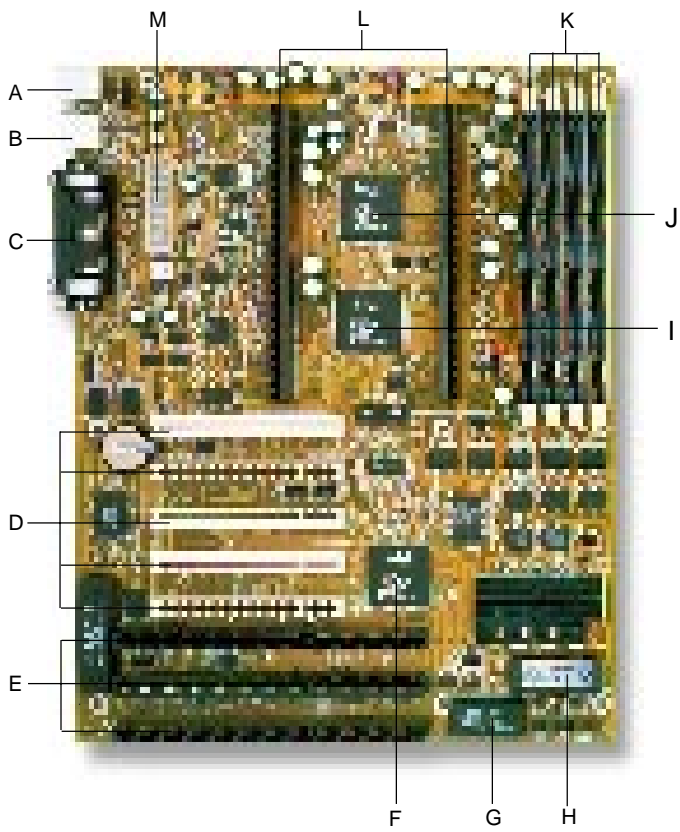
Dimension

- ATX Form Factor: 30cm(L) x 24.5cm(W) x 6 layer PCB.
- Double deck I/O connectors, compatible with Intel® Venus Motherboard.

Mounting

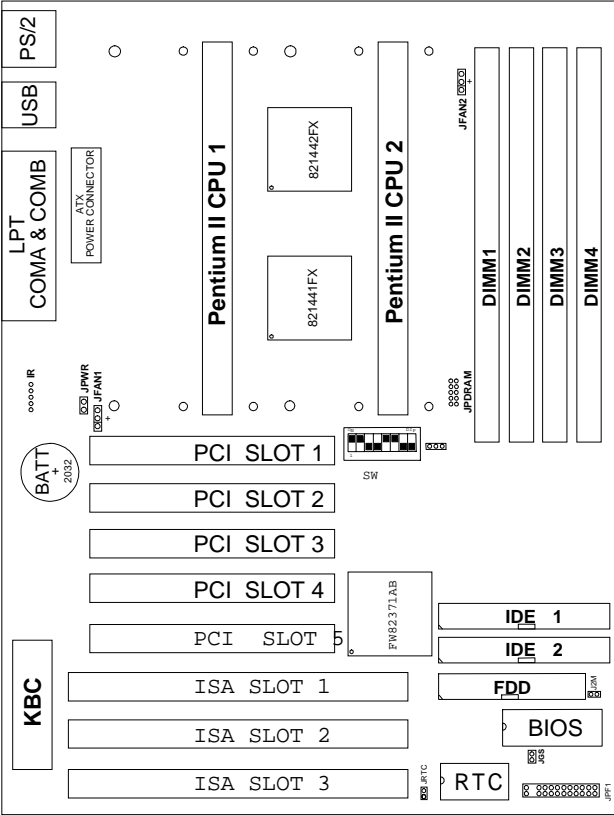
- 8 mounting holes.

1.2 Parts of the Motherboard



A	PS/2 Port	Top: Mouse Bottom: Keyboard
B	USB Port	Top: Port 1 Bottom: Port 2
C	COM/LPT Ports	Top: Parallel Port Bottom: Two Serial Ports
D	Five 32-Bit PCI SLOTS	
E	Three 16-Bit ISA SLOTS	
F	PCIsset 82371SB PIIX 3	
G	Non-Volatile RTC	
H	Flash BIOS	
I	PCIsset 82441FX	
J	PCIsset 82442FX	
K	Four 168-PIN DIMM SOCKETS	
L	Two Slot 1 for Dual Pentium II Processor	
M	ATX 20-Pin Power Connector	

1.3 Mainboard Layout



MS-6110