Chapter 1

Introduction

The PCI Pentium™ II NA5 PCI/ISA system board is a high-performance personal computer system board based on the Pentium™ II microprocesssor. The Pentium™ II CPU supports MMX™(Multimedia Extension) feature.

The system board 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 conrtroller 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.

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1.1 System Board Features

CPU
- Slot 1 for Pentium™ II Processor.
- Intel® Provides 233MHz and 266MHz processors.
- Core/Bus ratios are x2, x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8.

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

VRM
- VRM(Voltage Regulator Module) is on board. It provides power for the processor. The adjustment mechanism is controlled by the five weighted input(VID0-VID4) from the processor.

Chip Set
- Intel® 82440FX PCI Chipset.

Clock Generator
- 60MHZ/66.6MHz clocks are supported. Both meet Pentium™ II microprocessor and NATOMA(82440FX) Chipset specifications.

Main Memory
- Supports Six memory banks using Six 72-pin SIMM sockets.
- Up to 768 Mbytes main memory.
- Supports symmetric or asymmetric memory with ECC(Error Check Correct) function.
- Supports Fast Page (FP) Mode, Extended Data Output (EDO) Mode and Burst Extended Data Output (BEDO) Mode DRAM.

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

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

On-Board IDE
- An IDE controller on the Intel® 82440FX 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 (Reserved)
- Supports Dual Port USB.

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 Kbytes of CMOS RAM.

Keyboard Connector
- AT Keyboard connector and 5 pin for PS/2 mouse connector.
- PS/2 keyboard interface and PS/2 mouse interface (Reserved).

Dimension
- Standard Baby AT size: 33cm(L) x 22cm(W) x 4 layer PCB.

Mounting
- 8 mounting holes.

1.3 System Board Layout