Chapter 1

INTRODUCTION

The 694D PRO (MS-6321) ATX mainboard is a high-performance computer mainboard based on VIA® VT82C694X chipset. The 694D PRO is designed for Intel® Pentium® III (FC-PGA) processor for cost-effective business/personal desktop markets.

The Apollo Pro133A (VT82C694X) is a Socket-370 system logic north bridge with the addition of 133 MHz capability for both the CPU and SDRAM interfaces. Apollo Pro133A may be used to implement both desktop and notebook personal computer systems from 66MHz to 133MHz based on Socket-370 (Pentium® III processor). The primary features of the Apollo Pro133A-North Bridge are: Slot-1 or Socket-370 CPU (Front Side Bus) Interface (66 / 100 / 133MHz), DRAM Memory Interface (66 / 100 / 133MHz), AGP Bus Interface (66MHz), PCI Bus Interface (33MHz), Mobile Power Management.

The VT82C686A PSIPC (PCI Super-I/O Integrated Peripheral Controller) is a high integration, high performance, power-efficient, and high compatibility device that supports Intel and non-Intel based processor to PCI bus bridge functionality to make a complete Microsoft PC99-compliant PCI/ISA system.

1.1 Mainboard Features

CPU

- Support dual Intel® Pentium® III(FC-PGA) processor.
- Supports 533MHz, 566MHz, 600MHz, 667MHz, 700MHz, 733MHz, 800MHz, 866MHz, and 933MHz .

Chipset

- VIA® 694X chipset. (510 BGA)
  - FSB @133MHz
  - AGP 4x and PCI plus Advanced ECC Memory Controller
  - Support PC100/133 SDRAM & VCM technology
- VIA® VT82C686A chipset. (352 BGA)
  - Advanced Power Management Features
  - DirectSound AC97 Audio
  - Dual bus Master IDE Ultra DMA 33/66
- 1394 PHY Controller (optional)
  - TI® TSB41LV02 PHY Digital-to-Analog Transceiver
  - Support up to Two 1394/1394A v 2.0 Compatible Data Channels
- 1394 Link Layer Controller (optional)
  - 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
- Promise ATA100
  - Dual bus master IDE Ultra DMA/ATA 100
  - up to 133MB/sec burst transfer rate (through PCI Bus)

Clock Generator

- 66.6MHz, 100MHz and 133Mhz clocks are supported.

Main Memory

- Support eight memory banks using four 168-pin unbuffered DIMM.
- Support a maximum memory size of 2.0GB.
- Support ECC(1-bit Error Code Correct) function.
- Support 3.3V SDRAM DIMM.

Slots

- One AGP 4x(Accelerated Graphics Port) slot.
  - AGP specification compliant
  - AGP 66/133MHz 3.3V device support
- One CNR(Communication Network Riser) slot which support Modem only.
- Five 32-bit Master PCI Bus slots.
- Supports 3.3V/5V PCI bus Interface.

On-Board IDE

- An IDE controller on the VIA® VT82C686A Chipset provides IDE HDD/ CD-ROM with PIO, Bus Master and Ultra DMA 33/66 operation modes.
- Can connect up to eight IDE devices. (If Promise ATA100 driver is installed)
  - 4 Ultra DMA100 + 4 Ultra DMA33/66

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
  - 4 USB ports
  - 1 IrDA/HP connector for HPSIR.

Audio

- Chip integrated

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.

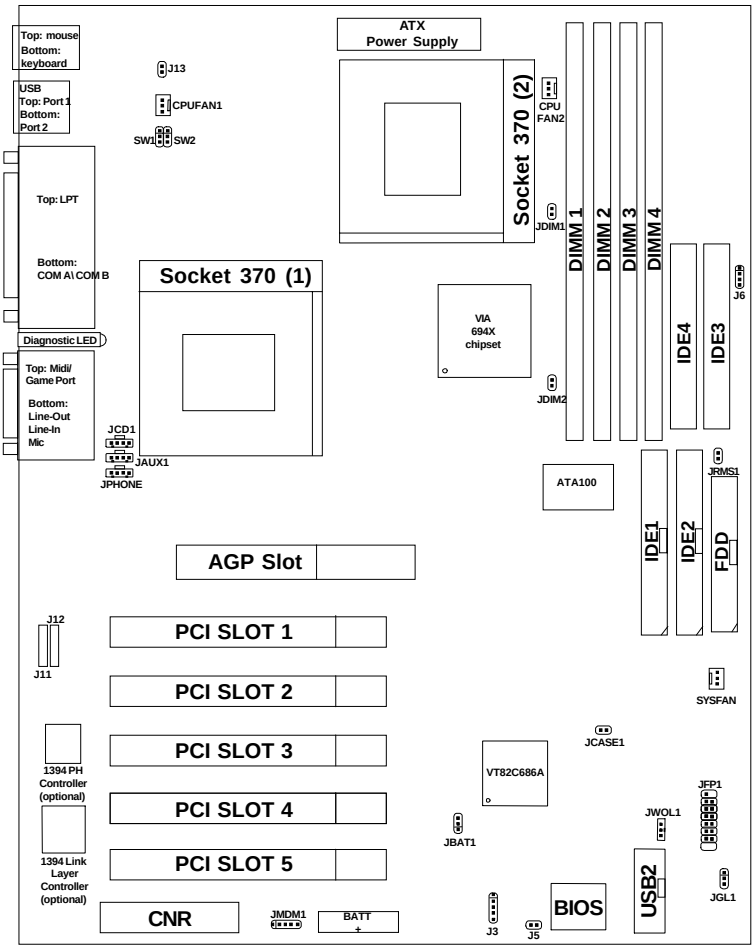
Dimension

- ATX Form Factor

Mounting

- 9 mounting holes.

1.2 Mainboard Layout



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