U S E R ' S M A N U A L

PCI Bus and ISA Bus Pentium Mainboard

With PCI IDE & Multi I/O

Read me First

Please short J7 pin2-3 before using your i430VX Mainboard

User's Manual

Version 1.1

Key Features

- Intel i430VX PCIset™ chipset
- Support either 75/90/100/120/133/166/180/200 MHz PENTIUM™ CPUs with 321pin ZIF socket and Voltage Regulator Module (VRM)
- Support Pentium P55C
- Support Cyrix 6x86, AMD K5 CPUs
- Uses 72-pin SIMM modules x 4 auto banking in multiple configuration up to 128MB.
- Supports Both Fast Page Mode and Extended DATA Output(EDO) DRAM module
- Support SDRAM/EDO DRAM/Page Mode DRAM use 168-pin DIMMx1
- Supports cache module socket, cache module options 256KB or 512KB pipeline burst SRAM module
- 3 PCI Local Bus slots, and 4 x 16 bits ISA Bus slots.
- All 3 PCI slots support Master mode.
- System BIOS support 4 IDE harddisk drivers that don't need device driver for S/W application, the capacity each harddisk can large than 528MB up to 8.4GB
- PCI Bus master IDE interface on board with two connectors support 4 IDE devices in 2 channel, the PCI IDE Controller supports PIO Mode 0 to Mode 4 at maximun transfer rate of 16.67 MB/s and Bus master IDE DMA Mode 2
- On board super Muti-I/O chip that support 2 serial port with 16550 Fast UART compatible, 1 parallel port with EPP and ECP capabilities, and a floppy disk drive interface
- Support PS/2™ connector.
- Support the Universal Serial Bus (U.S.B) (option)
- System BIOS supports NCR810 SCSI BIOS firmware and Green feature function, Plug and Play Flash ROM (option)

Unpacking the Mainboard

The i430VX Mainboard comes packed in a sturdy cardboard shipping carton. The carton contains:

- ❑ **The i430VX Mainboard**
- ❑ **This User's Guide**

Note:

Do not remove the mainboard from its original packing until you are ready to install it.

The i430VX mainboard is easily damaged by static electricity. Observe the following precautions while unpacking and installing the mainboard.

1. Touch an unpainted area of the system chassis before handling the mainboard or any component. Doing so discharge the static charge your body may have built.
2. Remove the mainboard for damage. Shipping may have lossened integrated circuits from their soekets. If any integrated circuit appears loose, press carefully to seat it firmly in its socket.

Do not apply power if the mainboard appears damaged , If there is damage to the board, or items are missing, contact your dealer immediately.

Power Precautions

Before you begin configuration, make sure you are working with an unplugged mainboard. Many components are powered by low-voltage current, but there still may be a dangerous electric current coming from the leads and power supply. You should take the following precautions:

- ❑ Turn off the power supply, and unplug the power cord before you begin
- ❑ Unplug all cables that connect the mainboard to any external devices.

Connectors

Attach system components and case devices to the mainboard via the mainboard connectors. A description of each .i.connector; and its connector pins follows. See Figure 2-1 for the location of the connectors on the mainboard.

Note:

Before making connections to the board, make sure that power to the system is turned off.

Mainboard component Locations

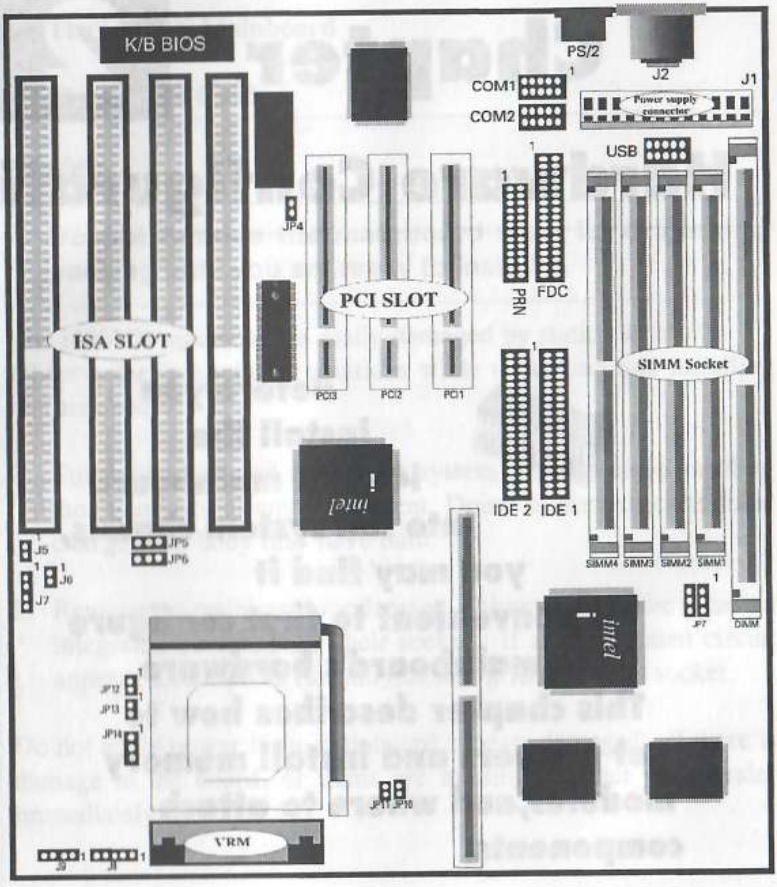
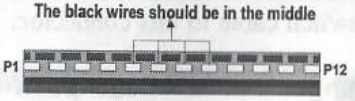


Figure 2-1 Mainboard Component Locations

J1 Power Supply Connectors

The power supply connectors are two six-pin male header connectors. Plug the dual connectors from the power directly onto the board connectors.

Most of power supply have two leads. Each lead has six wires. Two of which are black, orient the connectors, so the black wires are in the middle.



Pin	Description	Pin	Description
1	Power Good	7	Ground
2	+5V DC	8	Ground
3	+12V DC	9	-5V DC
4	-12V DC	10	+5V DC
5	Ground	11	+5V DC
6	Ground	12	+5V DC

J2 Keyboard Connector

A standard five-pin female DIN keyboard connector is located at the rear of the board J2.

Pin	Description
1	Keyboard Clock
2	Keyboard Data
3	N.C.
4	Ground
5	+5VDC

USB Universal Serial Bus Connector

Pin	Description	Pin	Description
1	+5 VDC	7	+5 VDC
2	DATA -	8	DATA -
3	DATA +	9	DATA +
4	Ground	10	Ground
5	N.C	11	N.C.

Jumper Settings

You can configure hardware options by setting jumper on the mainboard. See Figure 2-1 for jumper locations.
Set a jumper as follows:

- ❑ Short a jumper by placing the plastic jumper cap over two pins of the jumper.
- ❑ Open the pins of a jumper by removing the jumper cap.

Note:

When you open the jumper, attach the plastic jumper cap to one of the pins so you won't lose it.

Symbols:

For setting 3-pin jumpers, the symbols below are used:

Pins 1 and 2 are Shorted with a jumper cap.

Pins 2 and 3 are Shorted with a jumper cap.

For setting 2-pin jumpers, the following symbols are used:

The jumper is Shorted when the jumper cap is placed over the two pins of the jumper.

The jumper is Open when the jumper cap is removed from the jumper.

J9 Speaker Connectors

Attach the system speaker to connector J9.

Pin	Description
1	DATA Out
2	NC
3	Ground
4	+5V

JP4 FlashROM Voltage Selector

The mainboard can uses two types of Flash ROM - 5 volt and 12 volt. Set the mainboard for either type with jumper JP4. You can update both types with new BIOS files as they come available.

Description	JP4
12 volt Flash ROM	
EPROM and 5 volt Flash ROM	 (default)

JP5- AT Bus Clock Selector

Description	JP5
PCI Clock/4	 (default)
PCI Clock/3	

Note : CPU Speed=60MHz or 66MHz JP5 set to 1-2
CPU Speed=50MHz JP5 set to 2-3

J5 HDD LED Connector

Pin	Description
1	5V
2	Active Low

J6 Reset Switch Connector

Attach the Reset switch cable to this connector.

Setting	Description
Open	Normal Mode
Short	Reset System

J7- Internal/External Battery Selectors

Description	J7
External Battery	
Internal Battery	
Clear CMOS	

J8 Keylock & Power LED Connector

J8 is a keylock connector that enables and disables the keyboard and the Power-LED on the case.

Pin	Description
1	LED Output
2	NC
3	Ground
4	Keylock

JP12,JP13 - CPU Internal Clock Speed Selectors

Intel	Cyrix	AMD	JP12	JP13
x2.0	x2.0	Reserved		
x1.5	Reserved	x1.5		
x2.5	Reserved	Reserved		
x3.0	Reserved	Reserved		

Note : CPU Internal Clock Speed = External Input Clock x (table list) factor.

JP14 - CPU Voltage Regulator Output Selectors

Description	JP14	
3.3 Volt (STD/VR)		
3.5 Volt (VRE)		(default)

JP6 - Sleep Switch Connector

Attrach the sleep switch cable to this connector

Description	JP6
Normal Mode	
Sleep Mode On	

JP7 - DIMM Socket Voltage Selectors

Voltage Selectors	JP7	
3.3V		
5.0V		(default)

Note : All synchronous DRAM JP7 must be set to 3.3V position.

JP10,JP11 - CPU Speed Selectors

The mainboard has a clock generator that lets you choose the CPU frequency by settings jumpers JP10,JP11. You can set the CPU speed to 50/60MHz or 66 MHz as shown below.

	CPU Speed		
Jumpers	66 MHz	60 MHz	50MHz
JP10			
JP11			

Memory Installation

The mainboard lets you add up to 128MB of system memory via SIMM & DIMM sockets on the mainboard. Four SIMM sockets on the mainboard are divided into two banks: Bank 0, Bank 1. Each bank consists of two 72-pin SIMM modules. The mainboard supports the following memory configurations and DIMM socket consists of one 168-pin DIMM Module.

SIMM	SIMM	DIMM	Total memory
Socket Socket1&2		Socket 3&4	SIMM 1 through 4 +DIMM
4MBx2	None	None	8MB
8MBx2	None	None	16MB
16MBx2	None	None	32MB
32MBx2	None	None	64MB
None	4MBx2	None	8MB
None	8MBx2	None	16MB
None	16MBx2	None	32MB
None	32MBx2	None	64MB
None	None	8MBx1	8MB
None	None	16MBx1	16MB
None	None	32MBx1	32MB
None	None	64MBx1	64MB
4MBx2	4MBx2	None	16MB
4MBx2	8MBx2	None	24MB
4MBx2	16MBx2	None	40MB
4MBx2	32MBx2	None	72MB
None	4MBx2	8MBx1	16MB
None	4MBx2	16MBx1	24MB
None	4MBx2	32MBx1	40MB
None	4MBx2	64MBx1	72MB
8MBx2	4MBx2	None	24MB
8MBx2	8MBx2	None	32MB
8MBx2	16MBx2	None	48MB
8MBx2	32MBx2	None	80MB
None	8MBx2	8MBx1	24MB
None	8MBx2	16MBx1	32MB
None	8MBx2	32MBx1	48MB
None	8MBx2	64MBx1	80MB

SIMM Socket	SIMM Socket 1&2	DIMM Socket 3&4	Total memory SIMM 1 through 4 +DIMM
16MBx2	4MBx2	None	40MB
16MBx2	8MBx2	None	48MB
16MBx2	16MBx2	None	64MB
16MBx2	32MBx2	None	96MB
None	16MBx2	8MBx1	40MB
None	16MBx2	16MBx1	48MB
None	16MBx2	32MBx1	64MB
None	16MBx2	64MBx1	96MB
32MBx2	4MBx2	None	72MB
32MBx2	8MBx2	None	80MB
32MBx2	16MBx2	None	96MB
32MBx2	32MBx2	None	128MB
None	32MBx2	8MBx1	72MB
None	32MBx2	16MBx1	80MB
None	32MBx2	32MBx1	96MB
None	32MBx2	64MBx1	128MB

Notes:

1. Bank0 (SIMM1 & SIMM2) and DIMM the two types DRAM module can not be used at the same time.
2. All SIMMs and DIMM module speed must faster than 70ns
3. All SIMMs and DIMM module can use either 1-sided or 2-sides
4. SIMM socket DRAM type:Fast Page Mode or Extend DATA Out (EDO)
5. DIMM socket DRAM type Fast Page Mode or Extend Data Out (EDO) or synchronous DRAM (SDRAM)
6. Synchronous DRAM (SDRAM JP7) must set to 3.3V position

External Cache Configuration

This mainboard supports a cache module socket you can install pipeline burst SRAM on a cache module in the cache module slot, the cache module size can either 256KB or 512KB.

Cache Type	Size	Data Chip Size	Tag Chip Size
Pipeline Burst	256KB	32k32x2pcs	8k8,16k8 o r32k8x1pc
	512KB	32k32x4pcs	16k8 or 32k8x1pc
	512KB	64k32x2pcs	16k8 or 32k8x1pc