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# *Memo*

## Introduction

### 1-1 Product Specifications :

#### ☐ CPU

- Support full series of Intel Pentium® Processors(P54C), up to 200MHz. .
- Meet future Intel Pentium® Processors (P55C, P54CTB), Cyrix 6x86 and AMD K5 CPUs spec., up to 200MHz.
- System Clock 50/55/60/66/75 MHz.
- 321-pin ZIF Socket 7

☒ P55C is the first Intel processor to include MMX™ technology that add new instruction set to accelerate Multi-media and communication applications.



The split power plane design supports future VRT(Voltage Reduction Technology) processors, such as Intel's P55C, Cyrix's 6x86L and AMD's K5-AHQ parts. But, till now, these parts are not in volume production, we **do NOT give any rigid guaranty** on compatibility testing.



75MHz supporting for special OEM requirement

#### ☐ Main Memory

- 72-Pin SIMM Socket x 4 (4/8/16/32MB 32/36-bit 70-ns (or faster) SIMM acceptable)
- Support EDO/FPM type DRAM
- Maximum 128MB on board

#### ☐ Cache Memory

- Support 0/256(32k\*32x2)/512(64k\*32x2)KB Pipelined Burst SRAM on board

#### ☐ I/O Slots

- 16-bit ISA Bus x 3
- 32-bit PCI Bus x 4 (All are Master Modes, PCI 2.1 compliant)

#### ☐ Size

- 220mm x 250mm, 4-layer PCB

**□ BIOS**

- Award System BIOS
- 1Mb Flash ROM
- Support PnP, APM & CD-ROM booting features (DMI in the future)
- Built in NCR SCSI BIOS

**□ Chipset**

- Intel 82430VX four chips PCIset


**□ On Board Super I/O**

- 1FD+2S+1P
- Support two floppy drives, up to 1.44MB
- Meet EPP/ECP parallel port spec.
- 16550A compatible, high speed UART
- Support IrDA IR function, up to 115.2kbps

**□ Dual Enhanced IDE Ports**

- Support fast ATA spec., up to 4 devices, PIO mode 3/4 and Multi-word DMA 1/2.
- Bus Master drivers for all well-known Multi-tasking OS.

**□ Dual Channel USB Port**

 Now under testing of compatibility with different peripherals.

**□ Green PC**

- Meet EPA Green PC standard : power consumption under 30W on Doze, Standby or Suspend mode.

## 1-2 Product Contents

This product comes with the following components:

- Mainboard x 1
- 9-pin serial port & 25-pin parallel port ribbon cable with bracket x 1 (Figure 1-1)
- 25-pin serial port ribbon cable with bracket x 1 (Figure 1-2A), or adding a PS/2 mouse connector for Optional (Figure 1-2B)
- 40-pin IDE connector ribbon cable x 1 (figure 1-3)
- 34-pin floppy disk drive ribbon cable x 1 (figure 1-4)
- User's Manual x 1
- Flash EPROM Utility & Bus Master IDE Drivers Diskette x 1

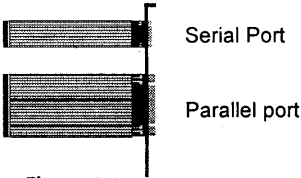


Figure 1-1

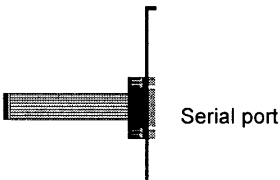


Figure 1-2A



Figure 1-2B

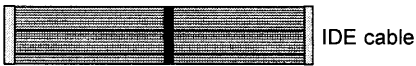
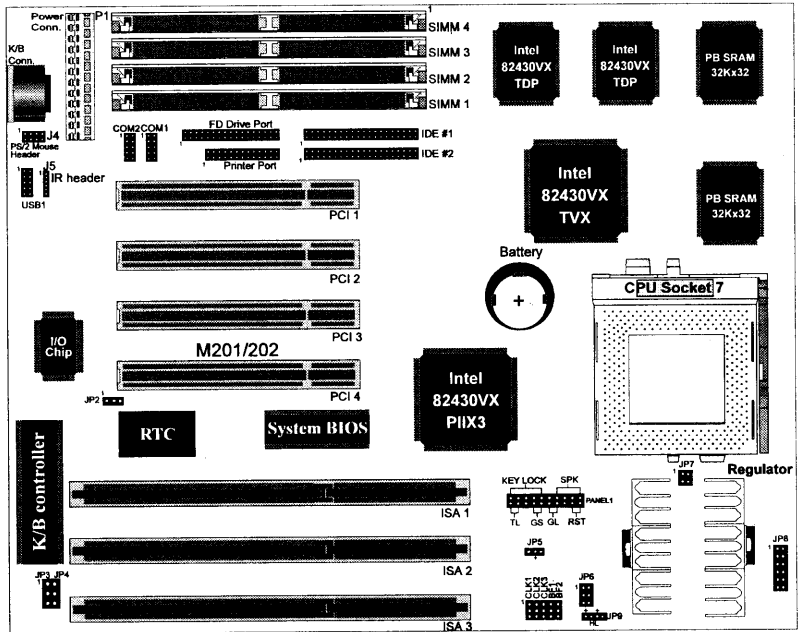


Figure 1-3



Figure 1-4

# 1-3 Main Board Layout



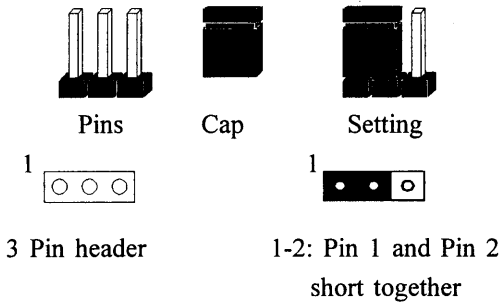
## Jumper and Connector Ref. page

<b>Jumper &amp; Connector No.</b>	<b>Function</b>	<b>Ref. page</b>
CLK1~CLK3	System clock Setting jumper	P.12
BF1~BF2	CPU speed setting jumper	P.12
JP6~JP8	CPU power voltage setting jumper	P.12
PANEL 1	Green switch header	P.16
	Green LED header	P.16
	Turbo LED header	P.15
	Speaker header	P.15
	System reset switch header	P.16
	Keyboard lock header	P.15
JP2	CMOS data clear jumper	P.17
JP3	PS/2 mouse enable/disable	P.15
JP4	Password bypass control jumper	P.17
JP5	CPU cooling fan header	P.16
JP9	IDE activity LED header	P.16
P1	Power supply connector	P.14
J1	Keyboard connector	P.14
J4	PS/2 mouse connector	P.15
J5	Infrared connector	P.16
USB1	Two channel USB port	P.17

## 1-4 How to Set Jumper

Jumper switch is used to select between various operating modes. A jumper switch consists of two or three gold pins, which stretches out from the system board. By using the cap to cover two pins is to short those pins. If the cap is not placed on any pins at all, it indicates to leave the pins open.

This section will discuss the functions and settings for all of the user-configurable jumpers on the main board. Refer to the diagram below to find the location of the various jumpers on the main board.

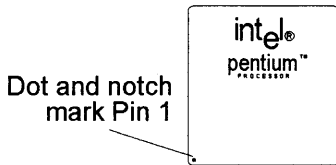


## Hardware Setup

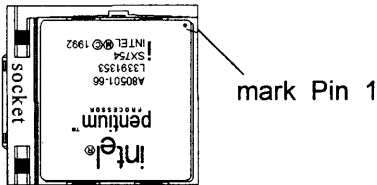
### 2-1 Installing a PGA type CPU in a ZIF Socket

The Intel Socket 7, incorporated in the mainboard specifications, is specially designed for the Pentium processor. While inserting the Pentium processor onto Socket 7, certain precautionary steps must be followed. The following diagrams of demonstration and explanation are worth of your note.

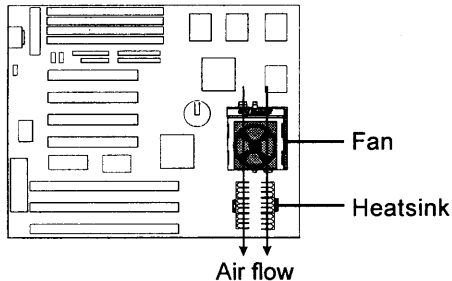
1. To align, match the processor corner containing the blunt edge and the white dot to the socket corner with the distinctive pin arrangement.



2. When the socket handle is up the processor should seat easily, No force is necessary.



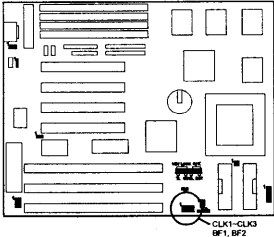
A cooling fan is strongly recommended to prevent possible overheating. Please orientate the fan, let the airflow can go across the on board heatsink.



## 2-2 Different Pentium® Class CPUs Installation

The mainboard supports Pentium class processors, up to 200MHz. If you install the CPU on this board, you must set the **System Frequency (CLK1~CLK3)**, **Frequency Ratio (BF1, BF2)** and **CPU Power Voltage (JP6~JP8)** to meet variable CPU specifications.

### CPU Speed Configuration :

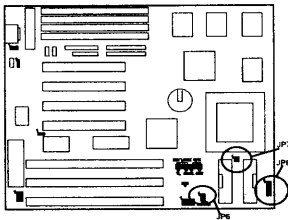


Freq. ratio	BF1, BF2
1.5	1
2	1
2.5	1
3	1

System freq.(MHz)	CLK1~CLK3
50	1
55	1
60	1
66	1
75	1

\*CPU Frequency = Frequency ratio x System frequency

### CPU Power Voltage Configuration :



For normal CPU

Core Vcc =I/O Vcc	JP6	JP7	JP8
3.3	1		1
3.4	1	1 2	1
3.5	1		1

For VRT processors (such as Intel's P55C, Cyrix's 6x86L or AMD's AHQ)

Core Vcc			I/O Vcc	
V	JP7	JP8	V	JP6
2.5		3	3.3	1
2.7		4	3.4	1
2.8	1	5	3.5	1
2.9		6		

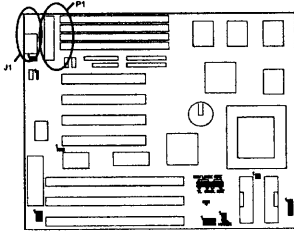
See below chart for details :

CPU-type	S-spec	CPU Power Voltage				System freq.			Freq. ratio	
		IO Vec	Core Vec	JP6	JP7	JP8	MHz	CLK1, CLK2, CLK3	Speed rate	BF1, BF2
Intel	P54C-75		3.3	1			50	1	x1.5	1
	P54C-90	QO653 QO655 SZ978 SX957 SX959	3.3	1			60	1	x1.5	1
		QO654 SX958	3.4	1						
			3.5	1						
	P54C-120	QO708	3.3	1			60	1	x2	1
	P54C-150		3.5	1	1	2				
	P54C-100	QO656	3.3	1			66	1	x1.5	1
		QO657	3.4	1						
	P54C-133		3.5	1			66	1	x2.5	1
	P54C-166									1
	P54C-200									1
	P55C-166		3.3	2.8	1		66	1	x2.5	1
P55C-200		2								2
Cyrix	6x86-P120 <sup>+</sup> @100MHz	028	3.5	1			50	1	x2	1
	6x86-P133 <sup>+</sup> @110MHz						55	1		
	6x86-P150 <sup>+</sup> @120MHz						60	1		
	6x86-P186 <sup>+</sup> @133MHz						66	1		
AMD	K5-PR75	ABQ	3.5	1	1	2	50	1	15	1
	K5-PR90						60	1		
	K5-PR100						66	1		
	K5-PR120 @90MHz						60	1		
	K5-PR133 @100MHz						66	1		

## 2-3 Jumpers Settings

Connectors are used to link the system board with other parts of the system, including the power supply, the keyboard, and the various controllers on the front panel of the system case. When connecting connect-wires to the connectors, you should remember that some of them must be aligned in a specific way in order to have proper functions.

### Power Supply Connector (P1)



The mainboard requires a power supply with 200 watts at least. While installing the board, the power supply connector is usually the last one to be connected. **Before connecting the power supply, please make sure it is not connected to power source.**



Most power supplies have two sets of six-wire connectors. Plug the dual connectors onto the board connector and make sure the black leads are in the center.

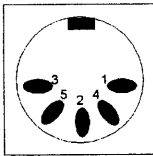


Power supply requirement :

Output voltage	Regulation tolerance
+5 Vdc	± 5%
-5 Vdc	± 10%
+12 Vdc	± 5%
-12 Vdc	± 10%

6	■	+5V	Red
5	■	+5V	Red
4	■	+5V	Red
3	■	-5V	White
2	■	GROUND	Black
1	■	GROUND	Black
6	■	GROUND	Black
5	■	GROUND	Black
4	■	-12V	Blue
3	■	+12V	Yellow
2	■	+5V	Red
1	■	Power GOOD	Orange

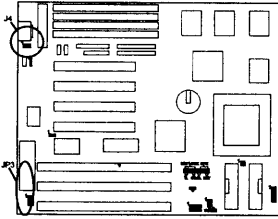
### Keyboard Connector (J1)



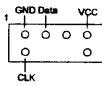
Pin	Definition
1	Keyboard Clock
2	Keyboard Data
3	(None)
4	Ground
5	+5V DC

Keyboard Connector / Pin Definitions

## PS/2 Mouse Control



### PS/2 Mouse Header(J4)



A PS/2 mouse adapter (8-pin mini-DIN ) with bracket is optional. You can connect it with the J4 header directly.



If a PS/2 mouse is used, you should assign IRQ12 to the PS/2 mouse. Otherwise, the IRQ12 will be assigned to other adapters(Disable PS/2 mouse function from BIOS & open the JP3).

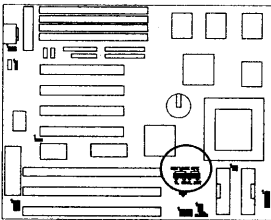
### PS/2 Mouse Enable/Disable Header(JP3)



: PS/2 mouse enable (default)

: PS/2 mouse disable

## Front Panel Header



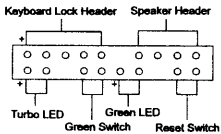
### Keyboard Lock Header

Pin	Definition
1	+5V DC
2	No Connect
3	Ground
4	Keylock
5	Ground

Power Good LED

### Speaker Header

Pin	Definition
1	Speaker Signal
2	GND
3	GND
4	+5V DC



### Turbo LED Header

LED On : System running in power saving.

LED Off : System running in normal mode.

### Changed Speed by keyboard

CTRL-ALT- "-" : Set to low speed

CTRL-ALT- "+" : Set to high speed



*This mainboard has no hardware Turbo/De-turbo function. If you connect a case-mounted Turbo LED, the LED will light while the system is turned on.*

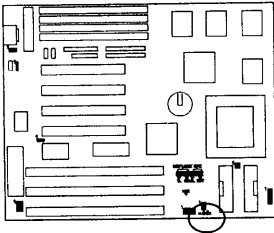
### **Green Switch / Green LED Header**

This allows the user to manually place the system into suspend (green) mode where system will make CPU clock down to 0MHz. the system will be waken up while the keyboard or mouse be touched. (The system resume events can be defined in the POWER MANAGEMENT SETUP screen of the BIOS)

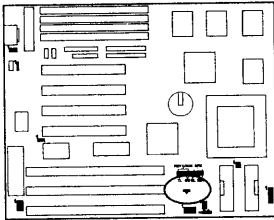
### **System Reset Switch Header**

The reset switch allows you to restart the system without turning the power off.

### **IDE Activity LED Header (JP9)**



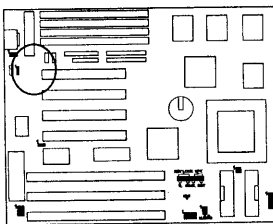
### **CPU Cooling Fan Header (JP5)**



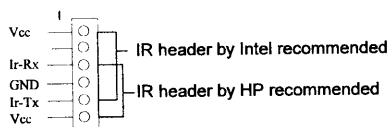
This adder connector would allow the fan to draw its power from the baseboard instead of the disk drive connector (some systems have all the disk drive power connectors in use).



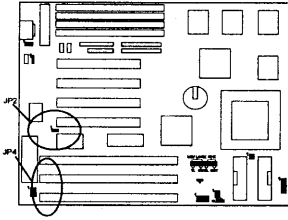
### **Infrared Connector (J5)**



If you set the BIOS's item "IR Function", to "HP SIR" or "ASK IR", the COM2 port will be switched to support IR function.





## CMOS Data Control



### ✎ Clear CMOS Data Jumper (JP2)


This clears the user-defines information stored in the RTC (Real Time Clock) chip.


 : Normal (default)

 : Clear CMOS data

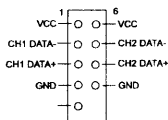
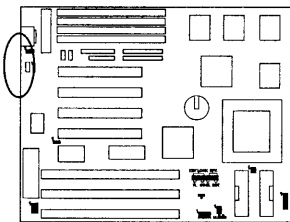
### ✎ Password Bypass Control Jumper (JP4)

When you power on the system, it will go directly to system boot, no any attention on password checking.(This function will be useful while you forget the password)

 : Normal (default)

 : Bypass the password checking

## USB(Universal Serial Bus) Connector



USB is an open industry standard, providing a simple and inexpensive way to connect up to 125 devices to a single computer port. Keyboards, mice, tablets, digitizers, scanners, bar-code readers, modems, printers and many more can all run at the same time.

USB is a dynamically reconfigurable serial bus with an elementary data rate of 12Mbps, based on off the shelf, low cost micro-controller technology. Its modular layered software protocol supports sophisticated devices and application programs.

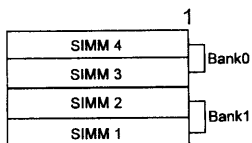
This board contains a USB Host controller and includes the root hub with two USB ports (meet USB Rev 1.0 spec.), which permits the connection of two USB peripherals or hub devices directly.



Now under testing of compatibility with different peripherals.

## 2-4 Main Memory Configuration

The DRAM memory system on board consists of bank0 and bank1, and the range memory size is 8 ~ 128 MBytes. You must install 2 pcs DRAM modules (same size, same speed, either single or double side) for each bank at a time, and no difference which bank you install first.



"S/S" - Single side  
 "D/S" - Double side  
 "---" - no use

Bank0	Bank1
S/S	----
S/S	S/S
S/S	D/S
----	S/S
D/S	----
D/S	S/S
D/S	D/S
----	D/S

### DRAM Specifications :

DRAM type : FP(Fast Page) or EDO(Extended Data Output) DRAM

Module size : Single-sided - 4/16 MBytes.

Double-sided - 8/32 MBytes.

DRAM speed : 70-ns or faster for system clock 50 or 60MHz,

60-ns for system clock 66MHz.

Parity : Either parity or non-parity.



64MB SIMM is still testing now.



### 3-1 Standard CMOS Setup

Choose the "STANDARD CMOS SETUP" option from the "CMOS SETUP UTILITY" menu (Figure 3-1) to display the following screen. This "Standard CMOS Setup" Menu allows users to configure system components such as date, time, hard disk drive, floppy disk drive, display and memory. When a field is highlighted, on-line help information is displayed on the left bottom edge of the Menu screen.

**ROM PCI / ISA BIOS (2A59GC39)**  
**STANDARD CMOS SETUP**  
**AWARD SOFTWARE, INC.**

---

Date (mm : dd : yy) : Fri, Oct 6 1995  
 Time (hh : mm : ss) : 9: 14: 43

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary Slave	: None	0	0	0	0	0	0	-----
Secondary Master	: None	0	0	0	0	0	0	-----
Secondayt Slave	: None	0	0	0	0	0	0	-----

Drive A : 1.44M, 3.5 in. Drive B : 1.2M, 5.25 in.	Base Memory : 640K Extended Memory : 15360K Other Memory : 384K <hr style="width: 100%;"/> Total Memory : 16384K
------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------

ESC : Quit	↑↓→← : Select Item	PU/PD/+/- : Modify
F1 : Help	(Shift) F2 : Change Color	

Standard CMOS Setup Screen

#### Primary/secondary Master/Slave TYPE:

This category identifies the types of hard disks that have been installed in the computer. There are 45 predefined types and 4 user defineable types are for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type User is user-defineable.

Press PgUp or PgDn to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for category. If your hard disk drive type is not matched or listed, you can use Type "User" to define your own drive type manually.

If you select Type "User", you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be included in the documentation of your hard disk vendor or the system manufacturer.

TYPE	drive type
CYLS.	number of cylinders
HEADS	number of heads
PRECOMP	write precom
LANDZONE	landing zone
SECTORS	number of sectors
MODE	mode type

If you select Type "Auto", BIOS will Auto-Detect the HDD & CD-ROM Drive at the POST stage and showing the IDE for HDD & CD-ROM Drive.

If the controller of HDD interface is **ESDI**, the selection shall be "Type 1".

If the controller of HDD interface is **SCSI**, the selection shall be "None".

If a hard disk has not been installed, select "None" and press <Enter>.

✎ **Write Pre compensation** - The size of a sector gets progressively smaller as the track diameter diminishes, but each sector must still hold 512byte. Write Pre compensation circuitry on the hard disk compensates for the physical difference in sector size by boosting the write current for sectors on inner track.

✎ **Landing Zone** - The cylinder location where the heads will normally park when the system is shut down.

✎ **Capacitor** = (Number of heads) x (Number of cylinders) x (Number of sectors per track) x ( 512 Bytes per sector)

✎ **Mode:**

For IDE hard drives, the BIOS provides three modes to support both normal IDE hard disks and also drives larger than 528MB:

**Normal mode** - for IDE drives smaller than 528MB.

**LBA mode** - provide LBA (Large Block Addressing) function for mass capacity hard disk that larger than 528MB and up to 8.4GB (Giga Bytes).

**Large mode** - some mass capacity hard disk operate in large mode and does not support LBA function for above mass capacity hard disk. Large mode is new specifications which may not be fully supported by all operation systems (MS-DOS is OK right now, but is uncommon.)

## 3-2 BIOS Features Setup

By choosing the "BIOS FEATURES SETUP" option from the "CMOS SETUP UTILITY" menu(Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

**ROM PCI / ISA BIOS (2A59GC39)**  
**BIOS FEATURES SETUP**  
**AWARD SOFTWARE, INC.**

Virus Warning : Disabled CPU Internal Cache : Enabled External Cache : Enabled Quick Power On Self Test : Enabled Boot Sequence : A,C,SCSI Swap Floppy Drive : Disabled Boot Up Floppy Seek : Enabled Boot Up NumLock Status : On Boot Up System Speed : High Typematic Rate Setting : Disabled Typematic Rate (Chars/Sec) : 6 Typematic Delay (Msec) : 250 Security Option : Setup PCI/VGA Palette Snoop : Disabled OS Select (For DRAM>64MB): Non-OS2 FDD IRQ Can Be Free : No	Video BIOS Shadow : Enabled C8000 - CBFFF Shadow : Disabled CC000 - CFFFF Shadow : Disabled D0000 - D3FFF Shadow : Disabled D4000 - D7FFF Shadow : Disabled D8000 - DBFFF Shadow : Disabled DC000 - DFFFF Shadow : Disabled
ESC : Quit F1 : Help F5 : Old Values F7 : Load Setup Defaults	

↑↓→← : Select Item  
 PU/PD/+/- : Modify  
 (Shift) F2 : Change Color

**BIOS Feature Setup Screen**

### A. VIRUS PROTECTION

#### Virus Warning:

After Enabled, BIOS activates a warning message to the user when any program attempts to access the boot sector or hard disk partition table and allows the user to intervene.

### B. CACHE CONTROL

#### CPU Internal Cache/External Cache

These fields allow you to enable or disable the CPUs "Level 1" built-in cache and "Level 2" secondary cache.

### C. BOOT UP FEATURES

After power on the system, BIOS will perform a series of device initializations and diagnostic tests.

### **Quick Power On Self Test**

If it is set to Enabled, BIOS will skip some check items during POST.

### **Boot Sequence**

This option sets the sequence of boot drives (either floppy drive A: or hard disk drive C:) that BIOS attempts to boot from after POST completes.

- ⊗ CD-ROM driver is becoming a standard device on computer systems, It has a large storage capacity advantage to store different operating system on it and will need boot-up of the system via CD-ROM. Now, we provides CD-ROM boot-up function that allows the user to select booting from A:, C: or CD-ROM. No matter if the CD-ROM is IDE or SCSI, the system will look for the first available bootable device for the operating system.

### **Swap Floppy Drive**

Enabled - The system will swap the floppy drive assignment so that drive A will function as drive B, drive B will function as drive A.

### **Boot Up Floppy Seek**

During POST, BIOS will determine if the floppy installed disk drive is 40 or 80 tracks. (360K type drive is 40 tracks and the 720K, 1.2M and 1.44M are 80 tracks)

### **Boot Up NumLock Status**

Define the keyboard as number keys or arrow keys.

### **Boot Up System Speed**

This option can be used to select the speed of CPU at system boot time.

## **D. KEYBOARD INTERFACE**

### **Typematic Rate Setting**

When enabled, you can set the following two typematic controls items.

#### **TypematicRate (Chars/Sec)**

The typematic rate sets the rate at which characters on the screen repeat when a key is pressed and held down.

#### **TypematicDelay (Msec)**

Choose how long after you press a key that a character begins repeating.

## **E. Security Option**

**System:** When entering wrong password, the system will not boot and will deny any access to the BIOS Setup.

**Setup:** When entering wrong password, the system can boot, but deny any access to the BIOS Setup.

### ***F. PCI/VGA Palette Snoop***

A system may have two display devices present in the system : a VGA-compatible interface and another graphics controller. In this case, both devices implement the color palette registers at the same I/O addresses. The configuration software must program one of the devices to actively act as the target, while the other device is programmed to quietly "snarf" the write data from the bus as it flies by on its way to the other device.

- ☒ Some non-standard VGA cards or MPEG video cards may not show colors properly. You can leave this setting at **Enable** that could correct this problem.

### ***G. OS Select (For DRAM > 64MB)***

If your system DRAM is larger than 64MB and you are running OS/2, please select "OS/2" as the item value. If running any other operating system, please set the item value to "Non-OS/2".

### ***H. Shadow Memory***

BIOS can copy adapter's ROM from address C0000h through DFFFFh to RAM for faster execution. Shadow setting is chipset specific and depending on system hardware.

### 3-3 Chipset Features Setup

By choosing the "CHIPSET FEATURES SETUP" option from the CMOS SETUP UTILITY menu(Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

ROM PCI / ISA BIOS (2A59GC39)			
CHIPSET FEATURE SETUP			
AWARD SOFTWARE, INC.			
AUTO Configuration	: Enabled	System BIOS Cacheable	: Disabled
DRAM Timing	: 70ns	Video BIOS Cacheable	: Disabled
DRAM RAS# Precharge Time	: 4	8 Bit I/O Recovery Time	: 3
DRAM R/W Leadoff Timing	: 7	16 Bit I/O Recovery Time	: 2
Fast RAS To CAS Delay	: 2	Memory Hole At 15M-16M	: Disabled
DRAM Read Burst (EDO/FP)	: x222/x333	Peer Concurrency	: Enabled
DRAM Write Burst Timing	: x222	Passive Release	: Enabled
Fast MA to RAS# Delay CLK	: 1		
Fast EDO Path Select	: Disabled		
Refresh RAS# Assertion	: 5 Clks		
ISA Bus Clock	: PCICLK/4		
		ESC : Quit	↑↓→← : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift) F2 : Color
		F7 : Load Setup Defaults	

#### Chipset Features Setup Screen



Above all the entries on the screen are optional settings for this mainboard and you should not change them.

- ☒ If professional engineers or customers would like to make some adjustments to gain even better system stability and performance, please visit URL://www.award.com to search for helpful relative information.

#### A. 8-bit I/O Recovery Time & 16-bit I/O recovery Time

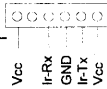
This category is used to add additional recovery delay between CPU or PCI master 8-bit (or 16-bit) I/O cycles to the ISA Bus. The options are 1 to 8 and N/A.



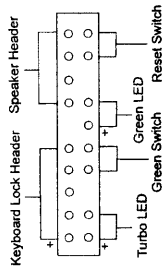
**J4:** PS/2 mouse connector



**J5:** IR connector



**PANEL1:**



**JP2:** CMOS clear data jumper.

- 1~2 short: Normal (default)
- 2~3 short: Clear CMOS data

**JP3:** PS/2 Mouse Enable/Disable

- 1~2 short: Normal (default)
- 2~3 short: PS/2 mouse disable

**JP4:** Password bypass control jumper

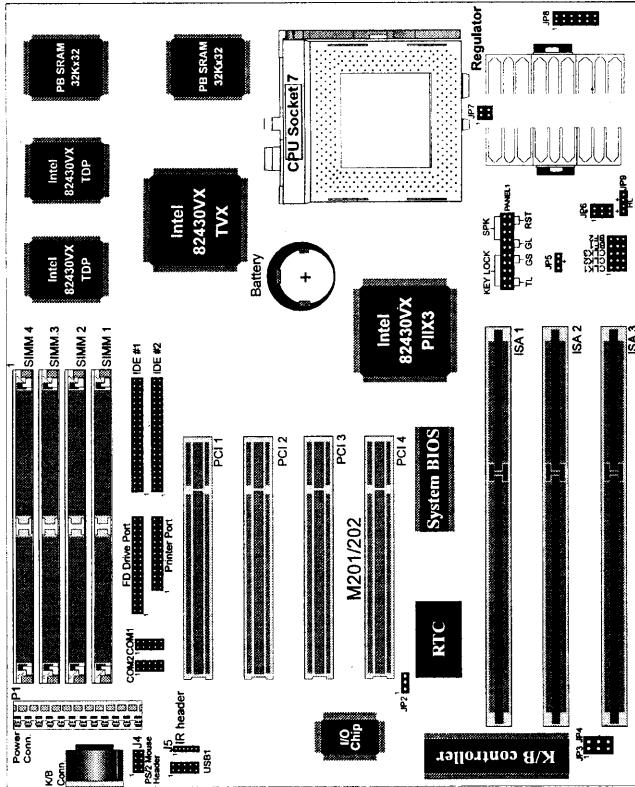
- 1~2 short: Normal (default)
- 2~3 short: Password bypass

**JP5:** CPU cooling fan header



**JP9:** IDE activity LED header

Int. CPU Speed = Speed rate x System clock	BF1	BF2
75/90/100 = 1.5 x system clock	1~2	1~2
110/120/133 = 2 x system clock	2~3	1~2
150/166 = 2.5 x system clock	2~3	2~3
180/200 = 3 x system clock	1~2	2~3



For VRT (Voltage Reduction Technology) processor (such as Intel P55C), the split power plan (CPU's core voltage ≠ CPU's I/O voltage) design is required.

Core Vcc		I/O Vcc	
V	JP7	JP8	JP6
2.5	3	3.3	3.3
2.7	4	3.4	3.4
2.8	5	3.5	3.5
2.9	6		

CPU-type	S-space	CPU Power Voltage				MHz	System freq.	Speed rate	Freq. ratio
		I/O Vcc	Core Vcc	JP6	JP7				
Intel	P54C-75	3.3				50	1	x1.5	BF1, BF2
	Q0653 Q0655 Q0656 S0657 S0659	3.3						x1.5	
	P54C-90	3.4				60		x2	
	P54C-120	3.3						x2.5	
	P54C-150	3.5						x1.5	
	Q0656	3.3						x2	
	Q0657	3.4						x2.5	
	P54C-100	3.3						x3	
	P54C-133	3.5				66		x2.5	
	P54C-166	3.3	2.8					x3	
P54C-200	3.3	2.8					x2.5		
P55C-166	3.5						x2		
P55C-200	3.5						x2		
Cyril	686-P120+ 100MHz	3.5				50		x2	
	686-P133+ 110MHz	3.5				55		x2	
	686-P150 120MHz	3.5				60		x2	
	686-P166+ 133MHz	3.5				66		x2	
AMD	K5-PR75	3.5				50		1.5	
	K5-PR90	3.5				60		1.5	
	K5-PR100	3.5				66		1.5	
	K5-PR120 90MHz	3.5				60		1.5	
K5-PR133 100MHz	3.5				66		1.5		

## A. Selecting "Power Management" Mode:

### Power Management

**User Define** - User can configure her/his own power management function

**Disabled** - Disable the power management features.

**Min. Saving** - All timers are in their min value.

Doze - 1hr, Standby - 1hr, suspend- 1hr.

**Max. Saving** - all timers are in their max value.

Doze - 1min, Standby - 1min, suspend- 1min.

### PM Control by APM

Support the Intel and Microsoft INT 15h Advanced Power Management BIOS function which creates a interface to allow the OS to communicate with the SMM code. If APM is not installed, this option has no effect.

- ☒ APM(Advanced Power Management) should be installed to keep the time updated when the computer enters suspend mode activated by the BIOS Power Management. For DOS environments, you need to add DEVICE=C:\DOS\POWER.EXE. For Windows 3.1x and Windows 95, you need to install Windows with the APM feature.

### Video Off Method

**Blank** -BIOS will only blanks the screen when disabling video.

**V/H SYNC+Blank** - BIOS will blanks the screen and turn off V/H SYNC signals to turn off the V-SYNC and H-SYNC signals from VGA cards to monitor.

- ☒ If Green monitors detect the V/H-SYNC signals turned off, it cuts the electron gun to save power consumption.

## B. Modem Use IRQ

While modem rings up, that will wake up the system from green mode (Certainly, you should connect the Modem to COM2 (default INT=3) and turn on the resume event in green mode.

## **C. PM Time Setting**

### **Doze Mode :**

If no PM events happened and the Doze timer expires, system will enter CPU Doze mode.

### **Standby Mode**

If system runs in Doze mode and the Standby timer expires, system will enter CPU Standby mode (CPU speed = CPUCLK / 3 MHz) from Doze mode.

⊗ The CPUCLK (external CPU clock ) means system clock mentioned in this manual.

### **Suspend Mode**

If no any activity continued, and the Suspend timer expires, the system will stop the CPU clock (CPU speed = 0 MHz).

- ⊗ Within Standby or Suspend, system may also turn off the video signal and power down the hard disk driver (depend on "HDD Power Down" setting).

### **HDD Power Down**

When the HDD idle time has elapsed, the BIOS sends a command to the hard disk to enter sleep mode (turn off the motor). This function is only valid for IDE HDDs that support power saving function.

## **D. PM Events Mask Control**

### **Individual IRQ wake up Event :**

If an interrupt request is generated by using a device , it will wake up the system to normal mode. (support by any green modes)

### **Power Down Activities:**

#### **the system runs at Suspend mode:**

If any event happens, the system will return to normal mode.

#### **the system runs at Doze or Standby mode:**

If any event happens, the timer will start recounting from zero.





## 3-7 Integrated Peripherals

### ROM PCI / ISA BIOS (2A59GC39) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	USB Controller	: Disabled
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto		
IDE Secondary Slave PIO	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
PCI Slot IDE 2nd Channel	: Enabled		
Onboard FDD Controller	: Enabled		
FDC Write Protect	: Disabled		
PS/2 mouse function	: Enabled		
Onboard Serial Port 1	: COM1/3F8		
Onboard Serial Port 2	: COM2/2F8		
COM2 MODE	: Standard		
Onboard Parallel Port	: 378H/IRQ7	ESC : Quit	↑ ↓ → ← : Select Item
Onboard Parallel Mode	: SPP	F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift) F2 : Color
		F7 : Load Setup Defaults	

#### PCI & ONBOARD I/O Setup Screen

### A. On Board IDE Control

#### IDE HDD Block Mode

Specify the maximum number of sectors that can be transferred at a time.

#### PCI Slot IDE 2nd Channel

If you designate a higher performance IDE board into the physical PCI slot (certainly, you must disable On-chip IDE controller), this item allows you to turn on the 2nd channel of this external board.

#### On-chip Primary/Secondary PCI IDE

You might choose to disable the On-chip IDE controller, if you are going to add a higher performance IDE board.

#### IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (programmed Input/Output) filed let you set a PIO mode (0-4) for each IDE devices that the internal PCI IDE interface supports. Modes 0 through 4 provide successively increased performance.

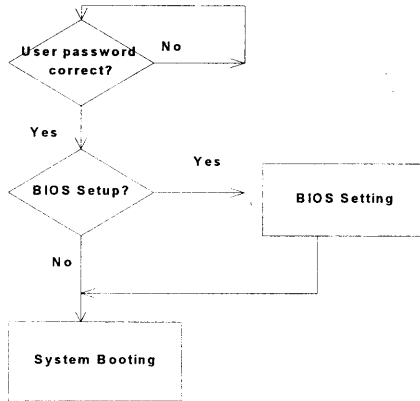
In Auto mode, the system automatically determines the best mode for each device.

### B. IR (Infra Red) Function

To enable this function, the COM2 port will be redirected to support IR functionality.

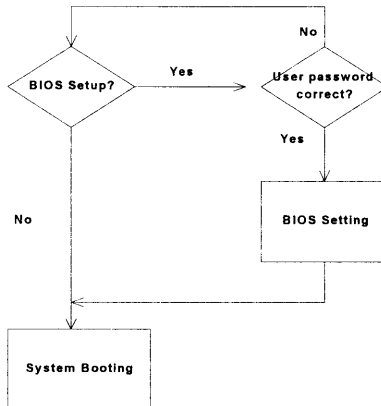
### 3-8 Supervisor Password & User Password Setting

#### A. Set "User password" Only

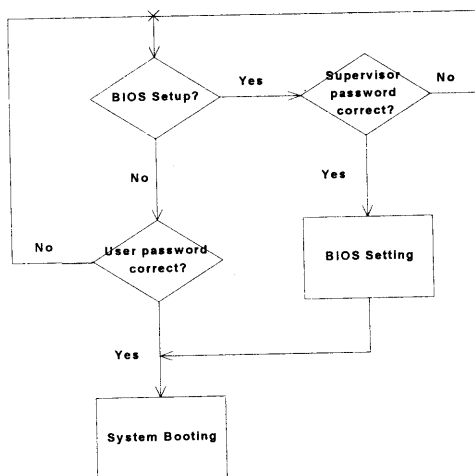


.If "Security Option" (locate in BIOS features Setup Screen) is set to "System"

If "Security Optional" is set to "Setup"



## B. Set both "Supervisor password" and "User password"



### 3-9 IDE HDD Auto Detection

This utility can AUTO DETECT IDE hard disk type .

#### ROM PCI / ISA BIOS (2A59GC39) CMOS SETUP UTILITY AWARD SOFTWARE, INC.

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :								

Select Secondary Slave Option (N=Skip) : Y							
OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
2 (Y)	547	530	32	0	1059	63	LBA
1	547	1060	16	65535	1059	63	NORMAL
3	547	530	32	65535	1059	63	LARGE

Note: Some OSES (like SCO-UNIX) must use "NORMAL" for installation  
ESC: Skip

IDE HDD Auto Detection Screen

### **3-10 Save and Exit Setup**

"**SAVE & EXIT SETUP**". If you select this and press the [Enter] key, the values entered in the setup utilities will be recorded in the CMOS memory of the chip set. The microprocessor will check this whenever you turn on your system, and compare this to what it finds as it checks the system. This record is required for the system operation.

### **3-11 Exit Without Saving**

"**EXIT WITHOUT SAVING**". Selecting this option and pressing the [Enter] key let you exit the Setup program without recording any new values or changing old ones.

# Software Drivers Brief Guide

## 4-1 Bus Master / PIO IDE Drivers Quick Installation



This board offers two E-IDE (Enhanced IDE) connectors, each of which can take two devices. Please set the primary channel for E-IDE hard disks and set the secondary channel for slow throughput ATAPI compliant peripherals. (such as ATAPI CD-ROM)



If you are installing a secondary E-IDE drive, you may have difficulty in getting the two drivers to work together since some brands of E-IDE drivers won't work on the same bus as other brands. You will have to designate one driver as a master and another as a slave.



If you want to get decent performance from you CD-ROM drive. You'll need to load SmartDrive (V5.0 or later version) to cache your CD. Please load the CD-ROM driver and MSCDEX before loading SmartDrive so the CD-ROM can cache.

### 1. Windows NT3.5

- 1) Unpack & copy drivers into C:\PIIXIDE
  1. Boot up Windows NT.
  2. Insert the "Bus Master IDE Drivers Diskette" into drive A(or B).
  3. In Windows program manager screen, choose "File" item.
  4. In "File Item List", choose "RUN" item.
  5. In "**Run**" screen, key in "A(or B):\WinNT\Setup.EXE" and <Return>
  6. Follows the directions appear on the screen to unpack the drivers files into C:\PIIXIDE directory.
  
- 2) Install the Bus Master Drivers
  1. From the **Program Manager**, double click on "**Windows NT Setup**" in the Main group.
  2. Select "**Options/Add/Remove SCSI Adapters...**"
  3. Click on **Add**.
  4. The "Select SCSI Adapter Option" dialog will appear; select "**Other (Requires a disk from a hardware manufacturer)**" from the "Adapter:" list box.

5. Next, the "Insert Diskette" dialog box will appear and **type in "C:\PIIXIDE"** and click "OK".
6. Next, the "Select OEM Option" dialog box will appear; **select "PIIX Bus Mastering IDE Driver" and click "OK"**
7. Next, the "Select SCSI Adapter Option" dialog box will appear; **click on the "Install" button** in the dialog box.
8. Next, the "Windows NT Setup" screen will appear prompting for the path of the installation files, type in "C:\PIIXIDE" and click on "**Continue**" button. If installation is successful, the "SCSI Adapter Setup" dialog box will reappear, and "PIIX Bus Mastering IDE Driver" will be listed. That means the driver is installed.
9. **Reboot** your system to load the driver.  
After installation, the PIIXIDE.SYS file is stored in the C:\<Win NT directory>\System32\Drivers directory.

## 2. Windows 95

The installation procedures described here were based on the Windows 95 Final Beta Release version.

- 1) Insert the floppy disk containing the driver file into drive A(or B).
- 2) Run the installation utility in drive A(or B).
  1. Double click the "My Computer" icon on the Desktop screen.
  2. Double click the drive A(or B) icon.
  3. Run the INSTALL.EXE applet in drive A (or B):\Win95
  4. Follow the advice shown on the screen to complete the installation.
- 3) When system prompts to reboot Windows95, select "Yes".
- 4) Restart Windows95 will detect Intel 82371SB PCI IDE Controllers and install the primary and secondary Bus Master IDE Drivers by sequence.
- 5) Restart Windows95 again.
  - ☒ The IDEATAPI.MPD driver will be installed and used as long as the PIIXIDE interface is enabled. After installation, the IDEATAPI.MPD file is stored in the C:\<Windows 95 directory>\System\IOSubSys directory. The IDEATAPI.INF information on the install floppy is integrated into the Windows 95 device database for automatic support of the PIIX Bus Master IDE driver and is stored in the C:\<Windows 95 directory>\INF directory as one of the file named OEM<x>.INF (name varies with system).

### 3. OS/2 2.0 and WARP 3.X

1) **Run** the install utility (INSTALL.EXE) in drive A(or B):\OS2

**INSTALL.EXE** will copy PIIXIDE.ADD from the source directory (A (or B):\OS2) to the target directory and change the CONFIG.SYS file to install it.

2) **Reboot the system.**

- ☞ For more information (like parameter settings, driver de-installation, Supported Devices...etc.), please refer to the README.TXT file on the diskette.

## 4-2 Update Your System BIOS

System provides the Flash ROM which allows users to update the BIOS of newer version without changing components.



Please remove (or remark) any installed Memory Management Utility (such as EMM386.EXE, QEMM.EXE...,etc.) in the CONFIG.SYS files, before running this utility.

1. Insert the Flash Utility Diskette in drive A(or B).
2. Type "A(or B):\AWDFLASH" at DOS command line and press [Enter] key.
3. You will see the following setup on screen.
4. Please key in **BIOS file name** . (The filename will be released from your dealer when a new up-date BIOS is released).

<b>FLASH MEMORY WRITER V5.2C</b>	
Copyright (C) 1993, Award Software, Inc.	
For 82430VX-2A59GC39	03/22/95
Flash Type - STT 28EE010 & 28EE011 /5V	
File Name to Program:	
Error Message:	

5. If you don't want to save the previous BIOS data to the diskette , please key in [N] .

<b>FLASH MEMORY WRITER V5.2C</b>	
Copyright (C) 1993, Award Software, Inc.	
For 82430VX-2A59GC39	03/22/95
Flash Type - STT 28EE010 & 28EE011 /5V	
File Name to Program 5VGM.BIN	
Error Message: Do You Want To Save BIOS (Y/N)	





# ***Memo***

# PART II German Edition

## Chapter 1

### 1-1 Technische Daten :

#### □ CPU

- Volle Unterstützung der Intel Pentium® Prozessoren (P54C) bis 200 MHz.
- Ist ausgerichtet auf zukünftige Intel Pentium® Prozessoren (P55C, P54CTB), Cyrix 6x86 und AMD K5 bis zu 200 MHz.
- Systemtakt 50/55/60/66 MHz
- ZIF Sockel 7
- ⊗ Das geteilte Spannungs-Versorgungs-Design VRT (Voltage Reduction Technology) ist für zukünftige Prozessoren, wie Intel P55C und AMD's K5-AHQ vorgesehen.
- ⊗ P55C ist der erste Intel Prozessor, der auf der Technologie MMX™ basiert, um Multimedia- und Kommunikationsprogramme zu beschleunigen.

#### □ Hauptspeicher

- vier 72-Pin SIMM-Sockel (mit 4/8/16/32/64MB SIMM-Modul 32/36-Bit 70 ns (oder schneller)) sind verwendbar.
- Unterstützt EDO/FP-Speichermodul (DRAM)
- Maximal bis 128MB bestückbar

#### □ Cache-Speicher

- ist ausgestattet mit Pipeline Burst SRAM 256 KB (32\*32x2) oder 512KB (64k\*32x2)

#### □ I/O-Slots

- 3 x 16-bit ISA Bus
- 4 x 32-bit PCI Bus (Master-Modus fähig, entsprechend PCI 2.1 Spec.)

#### □ Größe

- 220mm x 250mm, 4-layer PCB

**BIOS**

- Award System BIOS
- 1Mb Flash ROM
- Unterstützt PnP, APM & CD-ROM Booteigenschaften (in Zukunft auch DMI)
- Implementiertes NCR SCSI BIOS

**Chipsatz**

- Intel 82430VX (4 chip PCiset)

**Boardintegrierte Super I/O-Schnittstelle**

- UMC 8663B I/O chip
- 1FD+2S+1P
- Aktuelle SPP/EPP/ECP Parallelschnittstelle
- 16550A kompatibel (Hochgeschwindigkeits-UART)
- Unterstützt IrDA IR Funktion bis 115.2 kbps

**Zwei Enhanced-IDE Festplatte-Schnittstellen**

- Unterstützt bis zu PIO-Modus 4
- Bus Master-Fähigkeit für Multitasking-Betriebssysteme

**Zwei zusätzliche USB-Schnittstellen**



Diese befinden sich noch für die unterschiedlichsten peripheren Geräte in der Testphase.

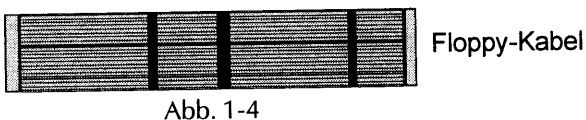
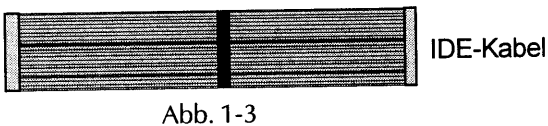
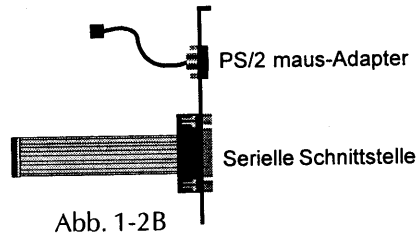
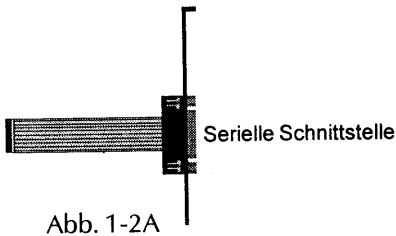
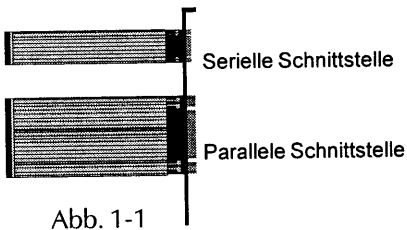
**Green PC**

- Entspricht dem EPA-Standard: Leistungsaufnahme unter 30 Watt in Doze- Standby- und Wartemodus.

## 1-2 Produktkomponenten

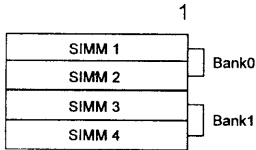
Dieses Produkt wird zusammen mit den folgenden Komponenten geliefert:

- Hauptplatine
- 9-Pin serielle Schnittstelle und 25-Pin Parallelschnittstellen-Flachband-Kabel mit Anschlußblende (Abb. 1-1)
- 25-Pin Flachband-Kabel für serielle Schnittstelle mit Anschlußblende (Abb. 1-2A) oder ein PS/2 Maus-Adapter (optional) (Abb. 1-2B)
- 40-Pin IDE Flachband-Kabel (Abb. 1-3)
- 34-Pin Flachband-Kabel für Floppydiskettenlaufwerk (Abb. 1-4)
- Benutzerhandbuch
- Diskette mit Flash EPROM Utility und Bus Master IDE Treibern.



## 1-3 Hauptspeicher-Konfiguration

Das Speichersystem für DRAM besteht aus Speicherbank 0 und Speicherbank 1. Die Speichergröße reicht von 8 bis 128 Megabytes. Es müssen jeweils 2 DRAM-Module der selben Größe und Zugriffszeit, ein- oder doppelseitig, installiert sein.



S/S - einseitig  
 D/S - doppelseitig  
 "—" - nicht belegt

Bank0	Bank1
S/S	----
S/S	S/S
S/S	D/S
----	S/S
D/S	----
D/S	S/S
D/S	D/S
----	D/S

### DRAM-Spezifikationen:

DRAM Typ : FP (Fast Page) oder EDO (Extended Data Output) Typ DRAM

SIMM Modul Größe: einseitig - 4/16 MB

doppelseitig - 8/32 MB

DRAM Zugriffszeit: 70-ns für Systemtakt 50 oder 60 MHz,

60-ns für Systemtakt 66 MHz.

Parität: Es werden Speicher-Module mit und ohne Paritäts-Chip unterstützt.

## 1-4 Installation für den Bus Master/PIO IDE Treiber



Diese Platine bietet zwei E-IDE (Enhanced IDE) Anschlüsse. An beiden können jeweils zwei Geräte (Festplatten und CDROM-Laufwerke) betrieben werden können. Wir empfehlen die EIDE-Festplatte auf IDE-1 (Primär-Kanal) und das ATAPI-CDROM auf IDE-2 (Sekundär-Kanal) zu legen.



Beim Installieren eines zweiten E-IDE-Laufwerkes könnte es mit unterschiedlichen Treibern Probleme geben.



Um die Leistung des CD-ROM-Laufwerks zu optimieren, sollte SmartDrive (Version 5,0 oder aktueller) geladen werden. Es empfiehlt sich den CD-ROM-Treiber und MSCDEX vor SmartDrive zu laden.

### 1.Windows NT 3.51

- 1) Die Treiber sind nach C:/PIIXIDE zu kopieren.
  1. Windows NT ist zu starten.
  2. "Bus Master IDE Drivers" Diskette in Laufwerk A oder B.
  3. "Datei" unter Windows Programmanager wählen.
  4. "Ausführen" in "Dateiliste" wählen.
  5. Unter "Ausführen", in A(oder B):/WinNT/setup.exe starten.
  6. Den Anweisungen auf dem Bildschirm folgen.
  
- 2) Installation der Bus Master Treiber
  1. Windows NT-Setup in der Hauptgruppe anklicken.
  2. Optionen/Hinzufügen/Entfernen SCSI Adapter.
  3. "Hinzufügen" anklicken.
  4. Die Dialogbox "SCSI Adapter Option Wählen" erscheint, zu wählen ist dann "Andere" (hierzu wird eine Diskette vom Hardwarehersteller benötigt) von der Liste "Adapter".
  5. Nun erscheint die Dialogbox "Diskette einlegen", C:/PIIXIDE ist einzugeben
  6. Dann erscheint die Dialogbox "OEM Option Auswahl". "PIIX Bus Mastering IDE Treiber" ist zu wählen.
  7. Nun erscheint die Dialogbox "SCSI Adapter Option auswählen". Auf der Fläche ist "Installieren" anzuklicken.
  8. Nun erscheint der Schirm "Windows NT Einstellung" und fragt nach dem Pfad für die Installationsdateien. "C:/PIIXIDE" ist einzugeben. Wenn die Installation erfolgreich ist, wird die Dialogbox "SCSI Adapter Einstellung"

wieder erscheinen, und "PIIX Bus Mastering IDE Treiber" wird aufgelistet sein. Dies bedeutet, daß der Treiber installiert ist.

9. Um den Treiber zu laden, ist das System neu zu starten. Nach der Installation ist die Datei PIIXIDE.SYS im Verzeichnis C:/WinNT/System32/Treiber gespeichert.

## **2. Windows 95**

Die hier beschriebenen Installationsanweisungen, basieren auf der Windows 95 Final Beta Version.

- 1) Die Diskette mit der Treiberdatei ist in das Laufwerk A (oder B) einzulegen.
- 2) Das Installationsprogramm ist auf Laufwerk A (oder B) auszuführen.
  1. Doppelklick auf "Mein Computer" der Desktopoberfläche.
  2. Doppelklick auf Schaltfläche für Laufwerk A (oder B).
  3. Das Programm INSTALL.EXE in Laufwerk A (oder B): A(B)/Win95 ausführen.
  4. Den Anweisungen auf dem Bildschirm zur Beendigung der Installation ist zu folgen.
- 3) Bei System-Rückfrage nach Neu-Start ist "Ja" zu wählen.
- 4) Ein Neustart von Windows95 wird die Intel 82371 ISB PCI Controller aufzeigen und den primären sowie den sekundären Bus Master Treiber in Reihenfolge installieren.
- 5) Windows95 ist dann erneut zu starten.

- ☒ Der IDEATAPI.MPD Treiber wird installiert und benutzt, so lange die PIIXIDE-Schnittstelle aktiv ist. Nach der Installation wird die Datei IDEATAPI.MPD im Verzeichnis C:/Windows95/System/IOSubsys gespeichert.  
Die IDEATAPI.INF Information auf der Installationsdiskette ist zur automatischen Unterstützung des PIIX Bus Master Treibers in die Windows95 Gerätedatenbank integriert, und ist im Verzeichnis C:/Windows95/INF mit dem Dateinamen OEMx.INF (Namen variieren mit jeweiligem System) gespeichert.

## **3. OS/2 und WARP 3.x**

- 1) Das Installationsprogramm im Laufwerk A (oder B) im Verzeichnis OS2 ist auszuführen: A(B)/OS2 INSTALL.EXE wird PIIXIDE.ADD aus dem Quellverzeichnis (A oder B:/OS2) ins Zielverzeichnis kopieren.
  - 2) Das System ist neu zu starten.
- ☒ Weitere Informationen ergeben sich aus README.TXT-Datei auf der Diskette.

## 1-5 Up-Date des System-BIOS

Das Flash ROM-BIOS erlaubt dem Benutzer eine Aktualisierung ohne Austausch von Komponenten.



Vor Ausführung des Programms sind alle installierten Speicher-Manager (wie EMM386.EXE, QEMM.EXE usw.) zu entfernen.

1. Am DOS PROMPT ist "FLASH52c.exe" einzugeben (oder eine aktuellere Version)
2. Auf dem Bildschirm erscheint :
3. UNBEDINGTE Klarheit über die zu "flashende" BIOS-Datei ist hier erforderlich, da sonst unter Umständen kein Systemneustart mehr möglich ist!

FLASH MEMORY WRITER V5.2C	
Copyright (C) 1993, Award Software, Inc.	
For 82430HX-2A59CC31	03/22/95
Flash Type - STT 28EE010 & 28EE011 /5V	
File Name to Program:	
Error Message:	

4. Falls die alten BIOS Daten nicht auf Diskette gespeichert werden sollen, ist "N" einzugeben.

FLASH MEMORY WRITER V5.2C	
Copyright (C) 1993, Award Software, Inc.	
For 82430HX-2A59CC31	03/22/95
Flash Type - STT 28EE010 & 28EE011 /5V	
File Name to Program 5VGM.BIN	
Error Message: Do You Want To Save BIOS (Y/N)	



## Appendix I

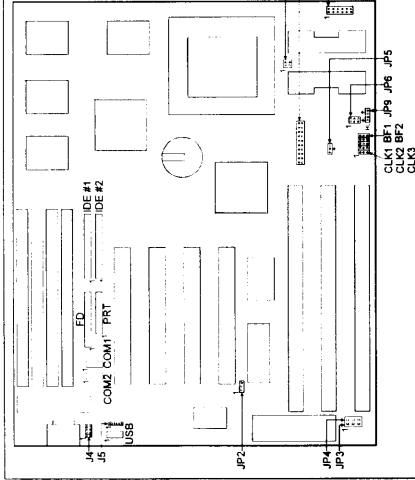
### On Board I/O Address & IRQ Maps

System Resource	IRQ	I/O Address
1. Timer	IRQ0	040~043
2. Keyboard	IRQ1	060~064
3. Programmable INT Controller	IRQ2	0020~0021, 00A0~00A1
4. COM2(B)	IRQ3	2F8~2FF
5. COM1(A)	IRQ4	3F8~3FF
6. Floppy	IRQ6	3F0~3F7
7. LPT1	IRQ7	378~37F
8. Real Time Clock	IRQ8	070~071
9. PS/2 Mouse	IRQ12	
10.Math coprocessor	IRQ13	0F0~0FF
11.IDE 1	IRQ14	1F0~1F7
12.IDE 2	IRQ15	170~177

☞ IRQ 5, 9, 10 and 11 will be available for other interface card.



# *Memo*



For normal CPU :

CPU Power Voltage (Core Vcc = I/O Vcc)		
Vcc	JP6	JP8
3.3	1 0 0 0 0 0	1 0 0 0 0 0
3.4	1 0 0 0 0 0	1 0 0 2 0 0
3.5	1 0 0 0 0 0	1 0 0 0 0 0

For VRT processor (such as Intel P55C),  
the split power plan design is required.

CPU Core Voltage		CPU I/O Voltage	
JP7	JP8	Core Vcc	IO Vcc
1 0 0 0 0 0	3 0 0 0 0 0	2.5	
1 0 0 0 0 0	4 0 0 0 0 0	2.7	
1 0 0 0 0 0	5 0 0 0 0 0	2.8	
1 0 0 0 0 0	6 0 0 0 0 0	2.9	3.3

J4: PS/2 mouse connector

J5: IR connector

JP3: PS/2 Mouse Enable/Disable

1-2 short: Normal (default)

2-3 short: PS/2 mouse disable

JP4: Short to by pass the password

1-2 short: Normal (default)

2-3 short: Password bypass

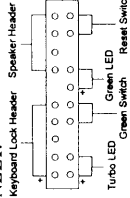
JP5: CPU cooling fan header



JP9: IDE Activity LED header



PANEL1:



JP2: CMOS clear data jumper

1-2 short: Normal (default)

2-3 short: Clear COMS data

Speed Rate		System Clock	
Rate	BF1,BF2	MHz	CLK1,CLK2,CLK3
x1.5	1 0 0 0 0 0	50	1 0 0 0 0 0
x2	1 0 0 0 0 0	55	1 0 0 0 0 0
x2.5	1 0 0 0 0 0	60	1 0 0 0 0 0
x3	1 0 0 0 0 0	66	1 0 0 0 0 0