IAC AP-5200IF Pentium CPU Card User Manual

Contents

IAC AP-5200IF Pentium CPU Card

Specifications:

- Memory: 64MB
- Operating System: Non-OS2
- CPU Internal Cache/External Cache: These two categories speed up memory access

Product Usage Instructions

BIOS Setup Guide:
The BIOS setup guide allows you to configure various system options.

Follow the steps below:

1. Access the BIOS setup by pressing the specified key during system boot (e.g., Del key).
2. Navigate to “CHIPSET FEATURES SETUP” to modify chipset register values.
3. Adjust settings such as DRAM timings, PCI configurations, and onboard device controls as needed.
4. Consult with a dealer before making changes you do not understand.

Chipset Features Setup:
This section allows you to configure chipset-related settings.

Here are some key points to consider:

- Adjust DRAM RAS# Pre charge Time, DRAM R/W Leadoff Timing, and other DRAM timings for optimal performance.
- Enable or disable features like System BIOS Cacheable, Video BIOS Cacheable, and PCI settings based on your requirements.

Power Management Setup:

Configure power management settings to optimize power usage.

Follow these steps:

1. Select from options like Disable, Enable, Minimum, Maximum, or User Define for power management.
2. If Power Management is enabled, adjust settings for HDD Power Down, System Doze, and System Standby based on your preferences.

FAQ:

- **Q: What are the options for IDE PIO Mode?**
  A: The options for IDE PIO Mode are Auto, Mode 0, Mode 1, Mode 4, according to the IDE drive. Set Auto for automatic detection of IDE PIO mode.
- **Q: How can I configure the Onboard Serial and Parallel Ports?**
  A: The Onboard Serial Ports can be set to Disabled or COM1-COM4. The Onboard Parallel Port options include 378:LPT1, 278:LPT2, 3BC, and Disabled. Additionally, choose from Normal, EPP, ECP, or EPP+ECP for Parallel Port Mode.
- **Q: What is the purpose of Quick Power On Self Test?**
  A: Quick Power On Self Test speeds up the POST process by shortening or skipping some check items during computer startup when enabled in the BIOS settings.

INTRODUCTION
The AP-5200IF CPU card is a high performance single board computer takes maximum advantage of PCI bus technology. It is a full-sized all-in-one plug-in CPU card using Intel Pentium-75/90/100, P54C-120 or P54CT processor selectable by jumper setting . Designed to the latest PICMG industrial PCI specification, the AP- 5200IF combines leading edge technology and Industry-wide compatibility. The AP-5200IF comes complete with a full array of 1/0 Including two RS232, one multi mode parallel, one PS/2 mouse, one FDD, two PCI IDE port, one SRAM socket, and two bank of DRAM sockets.

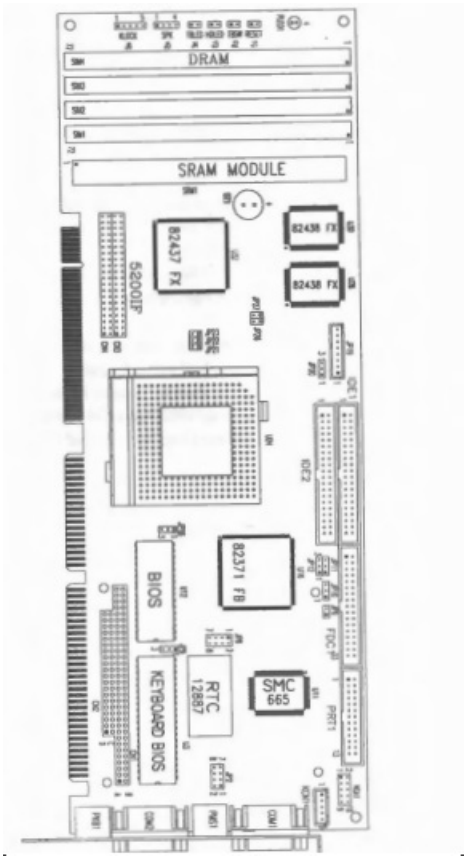
It’s 6-layer printed circuit board that combines with noise tolerant and low power consumption CMOS technology applied makes AP-5200IF to withstand and adapt harsh industrial environments very well. The AP-5200IF provides the primary elements for building an IBM PC/AT compatible computer for a wide variety of embedded 1ystem applications. It is fully compatible with the IBM PC/AT which means virtually all the software written for the IBM PC/AT will run on the AP-5200IF PCI – ISA CPU card. The AP-5200IF delivers the power and flexibility that you need for your high performance applications.

SPECIFICATION

- Microprocessor : Intel Pentium 75/90/1001120 MHz, and future Pentium processor
- Chipset : Intel 82C430FX PCI Chipset, SMC 37C665/666/669
- System Memory : 8 – 128MB, 4 socket for 72-pin SIMM
- Cache Size: Pipelined Burst Sync/Async Cache module slot, up to 512 KB
- BIOS: 128KB Award licensed BIOS
- Serial Port: Two RS232 serial ports (16550 compatible includes FIFO)
- COM 3/4 IRQ#: Selectable IRQ 10, 11
- Parallel Port : One multi-mode high performance parallel port (SPP/EPP/ECP)
- Keyboard Connector : 5-pin header and 6-pin Mini-Din
- PS/2 Mouse Connector : On board 6-pin Mini-Din

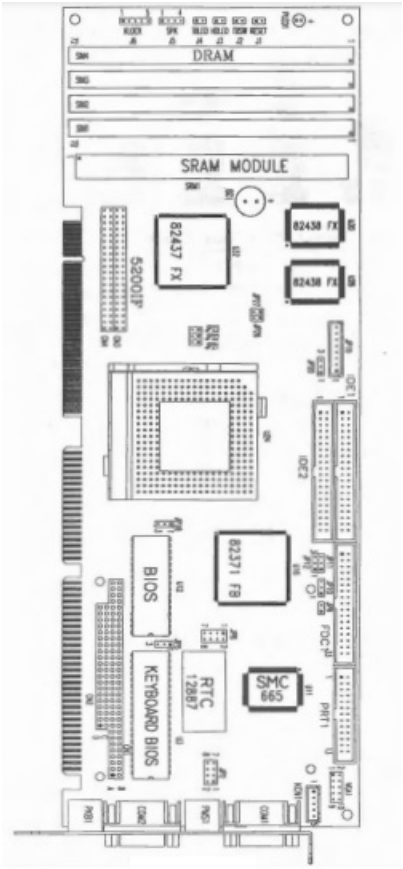
- IDE Drive Interface : Two PCI IDE port, up to 4 IDE drives
- Floppy Drive Interface : Up to two 2.88 MB drives
- Watch-Dog Timmer: 0.5/1/2/4 sec time-out period selectable
- RTC Battery: 12B887A RTC/Battery or compatible
- Built-in PC-104 expansion bus connector
- PCI bus piggyback connector for VGA /SCSI module
- Board Size: 336 mm x 122 mm

BOARD OUTLINE



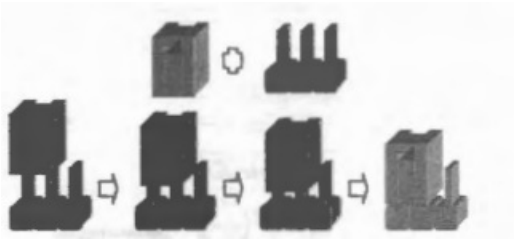
JUMPER SETTINGS AND CONNECTORS

Figure below shows the jumpers and connectors location on the AP-5200IF.



JUMPER SETTINGS
Jumpers are used to select the operation modes for your system. To set a jumper, a black cap containing metal contacts is placed over the jumper pin(s) according to the required configuration.

A jumper is said to be •on• or "1-2" when the black cap has been placed on one or two of its pins ,as show in the figure below :



"JP12, JP26, JP27: Select CPU Bua Clock

CPU Bus Clock	JP12	JP26	JP27
50MHz	1-2	OFF	OFF
60MHz	2-3	OFF	ON
*66MHz	2-3	ON	ON

(•) :Default

JP21.JP23: Select CPU Core to Bua Clock Multiply

Core / Bus Ratio	JP21	JP23
·1.5:1	OFF	OFF
2:1	ON	OFF
2.5:1	ON	ON
3:1	OFF	ON

(*) :Default

Note 1: The CPU core frequency can be found by multiplying the CPU bus clock frequency by the core/bus multiplier. For example , if the CPU bus clock frequency is 66.6Mhz and the core/bus multiplier is 3, the actual CPU core frequency win be 66.6 x 3 = 200MHz.

JP2 :WATCHDOG TIMER TIMOUT PERIOD SELECT JUMPER

JP2	FUNCTION
1-2	0.5 sec TIME OUT
3-4	1 sec TIMEOUT
5-6	2 sec TIMEOUT
• 7-8	4 sec TIME OUT

JP16: WATCH DOG FUNCTION SELECT JUMPER

JP16	FUNCTION
·1-2	ACTIVE BY RESET SYSTEM
2-3	ACTIVE BY NMI SYSTEM
OFF	DISABLE WATCH DOG

JP6 : ROM TYPE SELECT JUMPER

- 1-2: EP RO M/5V FLA SH MEMO RY
- 2-3: 12V FLASH MEMO RY

JP 8: COM3/4 /RQ# SELECT JUMPER

IRQ#	COM3	COM4
IRQ10	5-7	5-6
IRQ 11	7-8	6-8

Note: Default 1-2 , 3-4 on (CO M 1/2)

JP9: SLEEP MODE EXTERNAL SWITCH JUMPER

- ON : Sleep mode
- OFF: Normal

JP10: /DEZ SECONDARY /DE INTERRUPT SELECT JUMPER

- 1-2: IRQ15
- 2-3: MIRQ0 (Motherboard Interrupt)

JP 20 : POWERGOOD SOURCE SELECT JUMPER

- 1-2: INTERNAL POWERGOOD
- 2-3 : EXTERNAL POWERGOOD (From POWER SUPPLY)

JP13, 14, 15, 18, 24, 25: Factory Setting

Note:

1. (*) : Default
2. Above jumpers are reserved for future function enhancement, the A P-52001F using the default setting set at the factory , P lease do not change them

CONNECTORS DESCRIPTION

The connectors allow the CPU card to connect with other parts of the system. Some problems encountered with your system may be caused by loose or improper connections. Ensure that all connectors are in place and firmly attached.

SYSTEM STATUS INDICATE AND CONTROL CONNECTORS

CONNECTOR	PIN OUT	SIGNAL NAME
J 1 : Reset Switch Connector	1	GND
	2	Reset Signal Input
J 2 : Turbo Switch Connector	1	GND
	2	Turbo Control Signal Input
J 3 : Hard Disk LED Connector	1	HD Active Signal Output
	2	VCC
J 4 : Turbo LED Connector	1	VCC
	2	Turbo Out
J 5 : Speaker Connector	1	Speaker Output
	2	NC
	3	GND
	4	VCC
J 6 : Power LED & Keylock Connector	1	VCC --- LED +
1 & 3 : Power LED	2	NC
4 - 5 : Keylock	3	GND --- LED -
	4	Keylock Out
	5	GND

I /0 CONNECTOR DESCRIPTION

CONNECTOR	DESCRIPTION
KCN1	5 Pin Keyboard Cable Connector
PKB1	6 Pin Mini-Din Keyboard Connector
PMS1	6 Pin Mini-Din PS/2 MOUSE Connector
COM1	RS-232 Serial Port #1 or #3 Connector
COM2	RS-232 Serial Port #2 or #4 Connector
IDE1	Primary IDE Cable Connector
IDE2	Secondary IDE Cable Connector
FDC1	Floppy Cable Connector
PRT1	Printer Cable Connector
CN1	PC/104 8 Bits Connector
CN2	PC/104 16 Bits Connector
CN3 & CN4	PCI Piggyback Connector

JP19: EXTERNAL POWER CONNECTOR

PIN NO.	DESCRIPTION
1	+ 5V
2	+12V
3	-12V
4	GROUND
5	GROUND
6	- 5V
7	+12V
8	+ 5V

BIOS SETUP GUIDE

AWARD BIOS SETUP UTILITY

Once you enter Award BIOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from ten setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub- menu.

ROM PCI/ISA BIOS (2A59CL7B)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PCI CONFIGURATION SETUP LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS	PASSWORD SETTING IDE HOD AUTO DEFECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc: Quit F10: Save & Exit Setup	↑↓→← : Select Item (Shift) F2 : Change color
Time, Data, Hard Disk Type ….	

Standard CMOS setup
This setup page includes all the items in a standard compatible BIOS.

BIOS features setup
This setup page includes all the items of Award special enhanced features.

Chipset features
This setup page includes all the items of chipset special features.

Load Setup defaults
Setup defaults include the most appropriate value of the system parameter which the system would be in maximum performance. However, you may change the parameter value through the Option Page Setup Menu.

Load BIOS defaults
BIOS defaults indicate the values required by the system for the minimum performance. However, you may change the parameter through the Option Page Setup Menu.

Power Management Setup
This setup page includes all the power management timers & events for all green functions.

PCI Configuration Setup
This setup page includes PCI interrupts (INT#A ~ INT#D) & IRQs for P_CI add-ons.

HDD low level format
This setup page includes hard disk low level format utilities.

Password setting
Change set or disable password. It allows you ?o limit access to the system and setup, or just to setup.

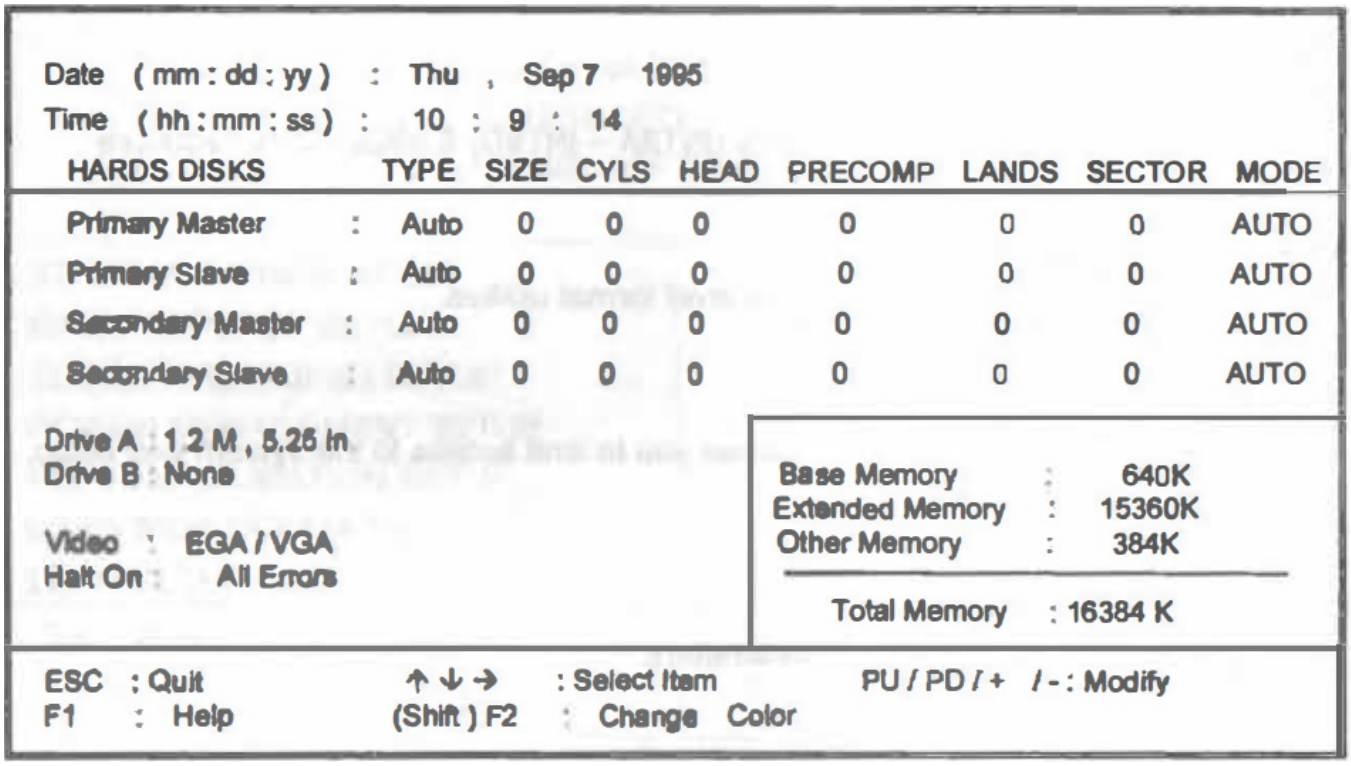
IDE HOD auto detection
Automatically configure hard disk parameters.

Save & exit setup
Save CMOS value changes to CMOS and exit setup.

EXIT without save
Abandon all CMOS value changes and exit setup.

STANDARD CMOS SETUP

This item in standard CMOS Setup Menu is divided into 10 categories. Each category includes one or more than one setup item. Use the arrow keys to highlight the item and then use the <PgUp> or <PgOn> keys to select the value you want in each item.
ROM PCI/ISA BIOS (2A59CL 7B)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.



Date
The date format is <month> <day> <year>

Time
The time format is <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

Primary Master/Slave & Secondary Master/Slave HDD Type
The category identifies the types of hard disk that has been installed in the computer. There are 46 predefined types and a user definable type. Types 1 to Type 46 are predefined. Type User is user-definable.

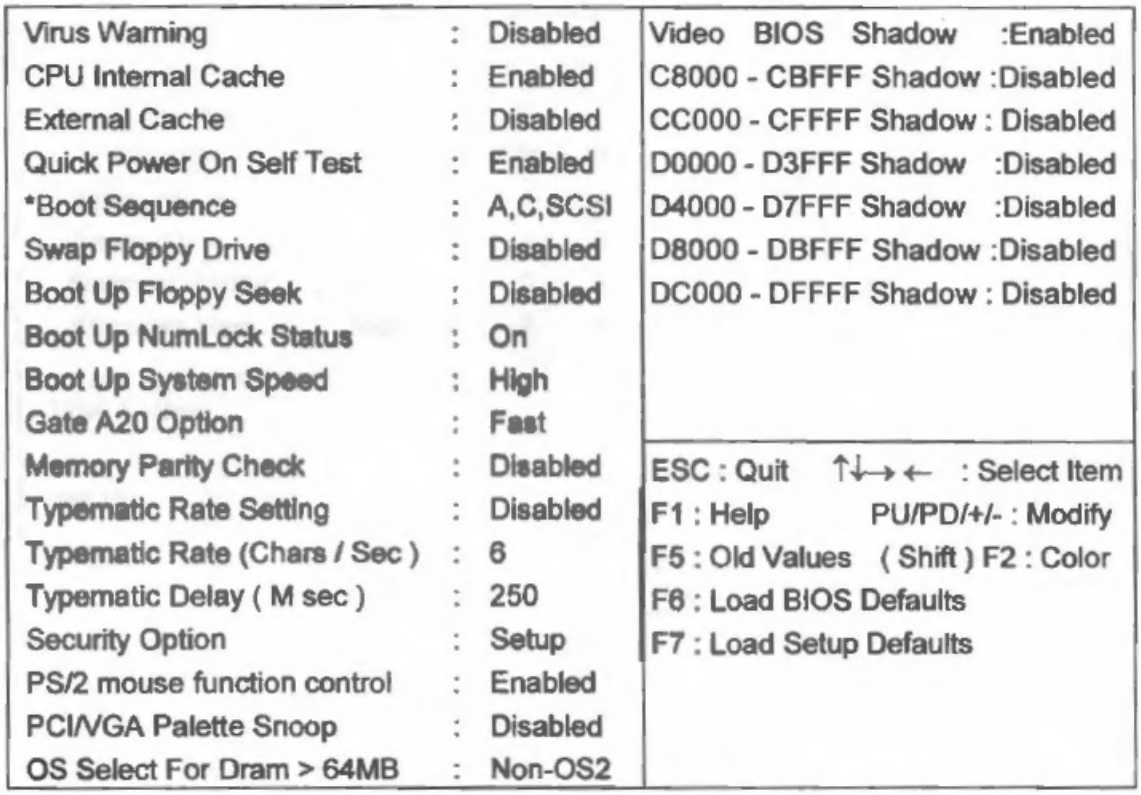
Drive A type/Drive B type
The category identifies the types of floppy disk drive A or B that has been installed in the computer. The options are 360KB 5.25″, 1.2MB 5.25″, 720KB 3.5″, 1.44MB 3.5″, 2.88MB 3.5″ and none.

Video
The category selects the type of adapter used for the primary system monitor that must match your video display card and monitor. The options are EGANGA, CGA 40, CGA 80, MONO.

Error halt
Toe category determines whether the computer will slap if an error is detected during power up.

BIOS FEATURES SETUP

Virus Warning
This category flashes on the screen. During and after the system boots up any attempt to write to the boot sector or partition table of the hard disk drive will halt the system, in the mean time, you can run anti-virus program to locate the problem.
ROM PCI/ISA BIOS (2A59CL7B)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.



- A, C parameters are for BIOS with date codes 11/01/96 and 02/14/96 only.

CPU Internal Cache/External Cache
These two categories speed up memory access.

Quick Power On Self Test
This category speeds up Power On Self Test (POST) after you power on the computer. If it is set to Enable, BIOS will shorten or skip some check items during Power On Self Test.

Boot Sequence
This category determines which drive computer searches first for the disk operating system (i.e … DOS). Default value is A, C .or SCSI .

Boot Up Floppy Seek
During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks.

Boot Up Num lock Status
The default value is On. When “On” the keypad is number keys, otherwise the keypad is arrow keys.

Security Option
This category allows you to limit access to the system and setup, or just Setup.

Video BIOS Shadow
It determines whether video BIOS will be copied to RAM. Video BIOS Shadow will increase the video speed.

C8000-CBFFF Shadow/DC0oo-DFFFF Shadow
These categories determine whether optional ROM will be copied to RAM by 16K byte.

CHIPSET FEATURES SETUP
This option is used to change the register values for the chipset registers. These registers control most of the system options in the computer.

ROM PCI/ISA BIOS (2A59CL 7B)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

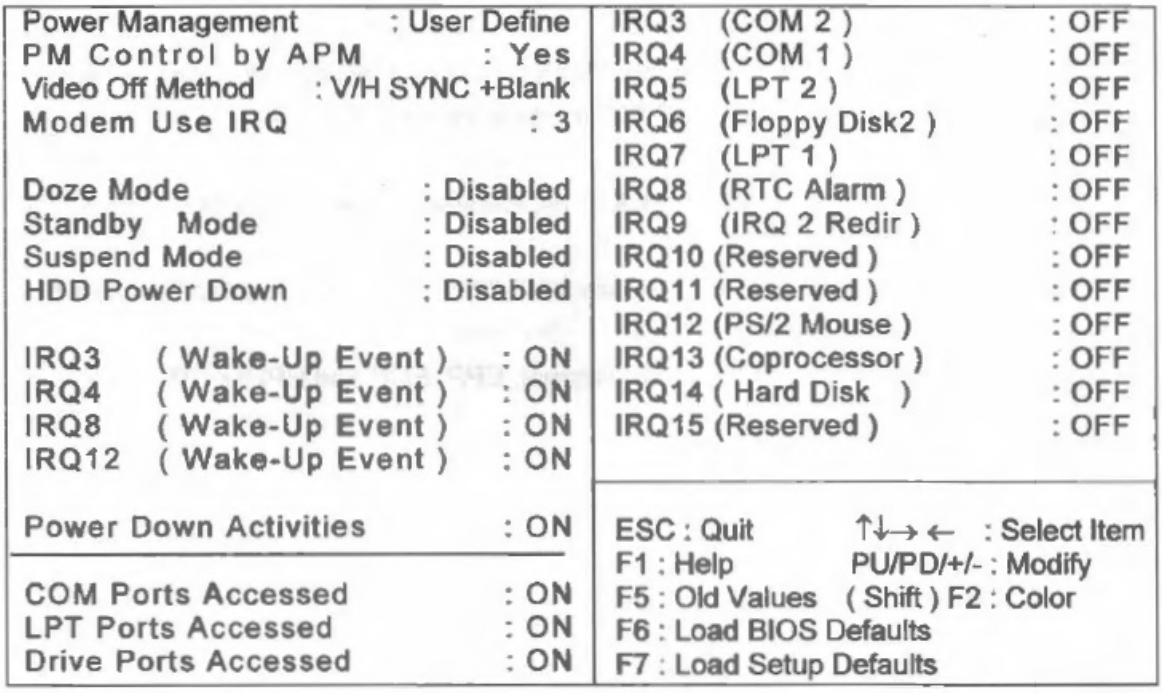
DRAM RAS# Pre charge Time **4** DRAM RN/ Leadoff Timing :8/6 DRAM RAS TO Cas Delay :3 DRAM Read Burst Timing :x2222 DRAM Write Burst Timing : x3333 System BIOS Cacheable : Disabled Video **BIOS Cacheable : Disabled** 8 Bit I/O R41CCMKY Time : 1 16 Bit 1/O Recovery Time : 1 Memory Hole At 15M-16M :**Disabled** IDE HOD Block Mode :Enabled 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	PCI Concurrency : Enabled PCI Streaming : Enabled PCI Bursting : Enabled Onboard FDC Controller : Enabled Onboard Serial Port 1 :Auto Onboard Serial Port 2 :Auto Onboard Parallel Port : 378/IRQ7 Parallel Port Mode : Normal ESC :Quit ↑↓→ ←: Select Item F1: Help PUIPD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults

ORAM Timing has been set at optimal value. It is recommended that dealer will be consulted before changing any values that you do not understand.

The options for: System BIOS Cacheable
Video BIOS Cacheable
IDE HOD Block Mode
IDE 32-bit Transfer Mode
On-Chip Primary PCI IDE
On-Chip Secondary PCI IDE
PCI Slot IDE 2nd channel
Onboard FDC controller
PCI streaming
are Enable or Disable.
The options for IDE PIO Mode are Auto, Mode 0 – Mode 4, according to the IDE drive. Set “Auto”, BIOS will Auto detect IDE PIO mode automatically. The options for “Onboard Serial Port 1 & 2” are Disabled, COM1 – COM4. The options for “Onboard Parallel Port” are 378:LPT1, 278:LPT2, 3BC and Disabled. The options for “Parallel Port Mode” are Normal, EPP, ECP and EPP+ECP.

POWER MANAGEMENT SETUP

The options for Power Management are Disable, Enable, Minimum , Maximum and user define . When disable , the Power Management will be in-active . Otherwise the HDD Power Down , System Doze , System Standby will be active according to the PM (Power Management) timers.
ROM PCI/ISA BIOS (2A59CL7B)
POWER MANAGEMENT SETUP
AWARD SOFTWARE ,INC.

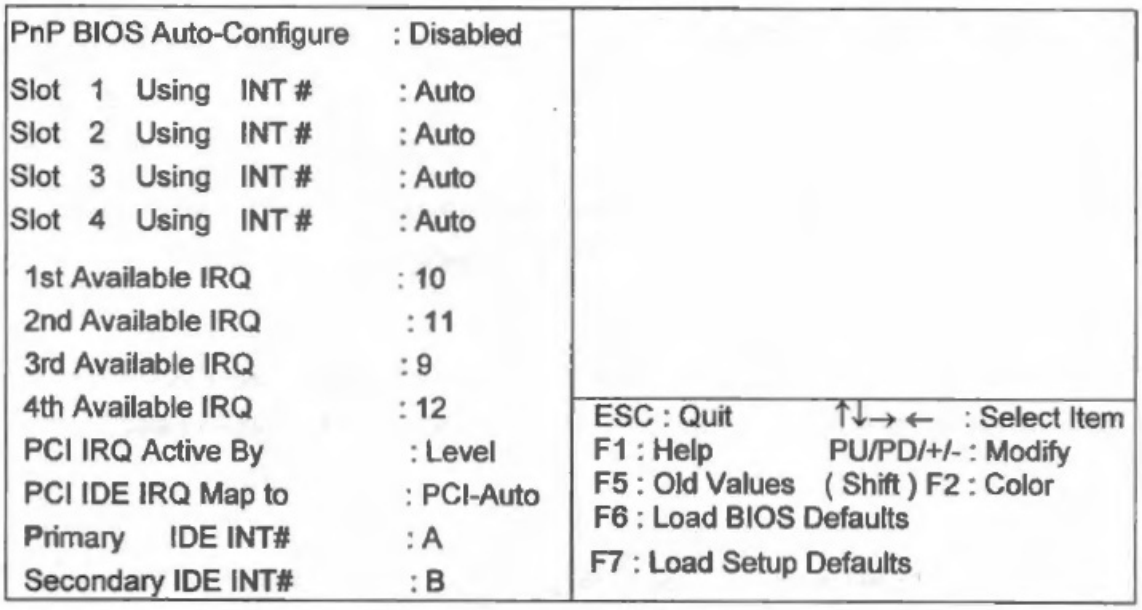


PM Timers
The System Doze, Standby and Suspend modes will be active setup by step according to PM Times.

PM Events
The System will be resumed immediately by PM Events through COM Port, LPT , Drive Port, IRQ 1 to IRQ 15.

***Note** : Some options in Power Management Setup will be inactive according to the CPU.

PCI CONFIGURATION SETUP
Since PCI is burned to plug & play , ideally no setup needed . However, there are many “DIRTY” PCI devices in the market. The Award Setup Utility is mainly for manual override of IRQs of these dirty devices.
ROM PCI/ISA BIOS (2A59CL7B)
PCI CONFIGURATION SETUP
AWARD SOFTWARE ,INC.



The options for : Slot 1~ 4 Using INT#” are AUTO , A,B,C, and D.

AUTO : BIOS will do the following automatically.

1. Ask the PCI device on which INT (A – D) which does it want to use for interrupt.
2. Check out which IRQ is available from the above.
3. Tell the device which IRQ has been assigned to it.

The A,B,C, and D : These options are reserved for “Dirty ” cards from which the system BIOS cannot tell which INT does it use.

Note:

1. Choose “AUTO “for all devices unless you know exactly which card is a dirty device & which INTs the card uses .
2. Choose Only ; AUTO • for Multi-Fun C PCI devices because options A , 8, C , D will force the BIOS to assign IRQs for function only .

The options for “1st ~ 4th Available IRQ” is 10, 11, 9, and 12
The system BIOS will assign these 4 available IRQs to find PCI device.
The option for ” PCI IRQ Activated By ” is Edge or Level
The option for ” PCI IDE IRQ Map To” is

PCI-AUTO : The BIOS will

1. Scan for PCI devices & determine the Location of PCI IDE device.
2. Assign IRQ 14 for primary IDE INT# for the special slot.

ISA : The BIOS will not assign any IRQs even if PCI IDE card is found , because some IDE cards connect the IRQ 14 &15 directly from ISA slot through a cord. (This. cord Is called Legacy Header)
The “Primary ICE INT #A” and ” Secondary ICE INT # B” to tell which INT # does the PCI IDE card ls using for its interrupts.

PASSWORD SETTING
When you select this function , the following message will appear at the center of the screen to assist you in creating password.

PASSWORD : ENTER
Type the password , up to eight characters, and press < Enter>. The typed password will now clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press < Esc > to abort the selection and not enter a password. To disable the password, just press <Enter> when you are prompted to enter password. A message will confirm the password begin disabled . Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED
If you selected System at Security Option of BIOS Features Setup Menu , you will be prompted for the password every time the system is rebooted or any time you try to enter Setup . If you select at Security Option of BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

INSTALLATION

This chapter describes the procedures for installing the AP-5200IF all-in-one CPU card into your system.

The following is a list of typical peripherals required to build a minimum system:

- Passive Backplane (ISA or PICMG) and Power Supply
- IBM PC/AT Keyboard
- Display Card
- Display Monitor
- Floppy or Hard Disk with OS or Flash/ROM Disk Emulator

INSTALLING THE SIMMS

1. Insert the first SIMM edge connector at a slight angle into the socket of SIMM 1 close to the center of the board. Note that the SIMMs are keyed and will only go in one way.
2. Push the SIMM back into the connector carefully until it snaps into place.
3. Check to make sure the SIMM is inserted securely.
4. Repeat Steps 1-3 for remaining SIMM in SIMM 2 – SIMM 4.

INSTALLING THE CPU

1. Match pin one (white dot) on the CPU with pin one of the ZIF socket. Note pin one is marked on the board. In addition, the ZIF socket has a diagonal comer or may have an arrow marked on the base of the socket denoting the side containing pin one.
2. To complete the installation, gently press the CPU into place.
3. Double check the insertion and orientation of the CPU before applying power. Improper installation will result in permanent damage to the CPU.

COMPLETING THE INSTALLATION

To complete the installation, the following steps should be followed:

1. Set the configuration jumpers in accordance with Chapter 2.
2. Make sure the power is off.
3. If use PC/104 display module, install the PC/104 display module into PC/104 socket CN1 and CN2 of AP-5200IF.
4. Install the AP-5200IF CPU card into one of the slots in a ISA passive backplane or PCI – ISA slot of PICMG backplane.
5. If use PC/104 display card, please omit this step. Install a display adapter into one of the slots in the passive backplane.
6. Connect the applicable 1/0 cables and peripherals, i.e. floppy disk, hard disk, monitor, keyboard, power supply, etc.

   Note : the color of pin one is usually red or blue, while others are gray.
7. Tum on the power.

INSTALLING THE PC/104 INTERFACE CARD

1. Insert pin headers (2 x 32 and 2 x 20) to CN1, CN2 of AP-5200IF.
2. Attach the PC/104 interface card with four 25mm (0.6″) brass spacer.
3. Insert the PC/104 interface card to CN1, CN2 of AP-5200IF (component side of PC/104 card to component side of AP-5200IF).

NOTE :The specification is herein referred to as “PC/104”, base on the 104 signal contacts on the two bus connectors.(64 pins on CN1 and 40 pins on CN2) It can be optimized for the unique requirements of embedded system applications. PC/104 modules can be of two bus types, 8 bits {CN1) and 16 bits {CN2).
Figure below show the PC/104 module dimensions and a typical module stack.

- Figure 1: PC/104 module dimensions.
- Figure 2: Illustrates a typical module stack of 8 bits or 16 bits modules (The 8 bits module on J2 connector)

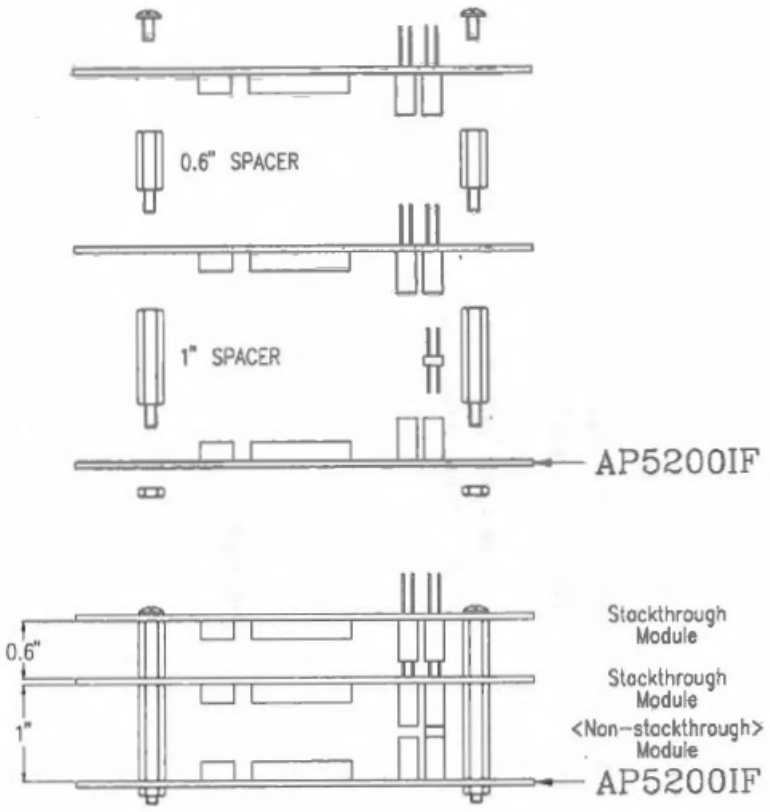


Figure 2. Typical Module Stack

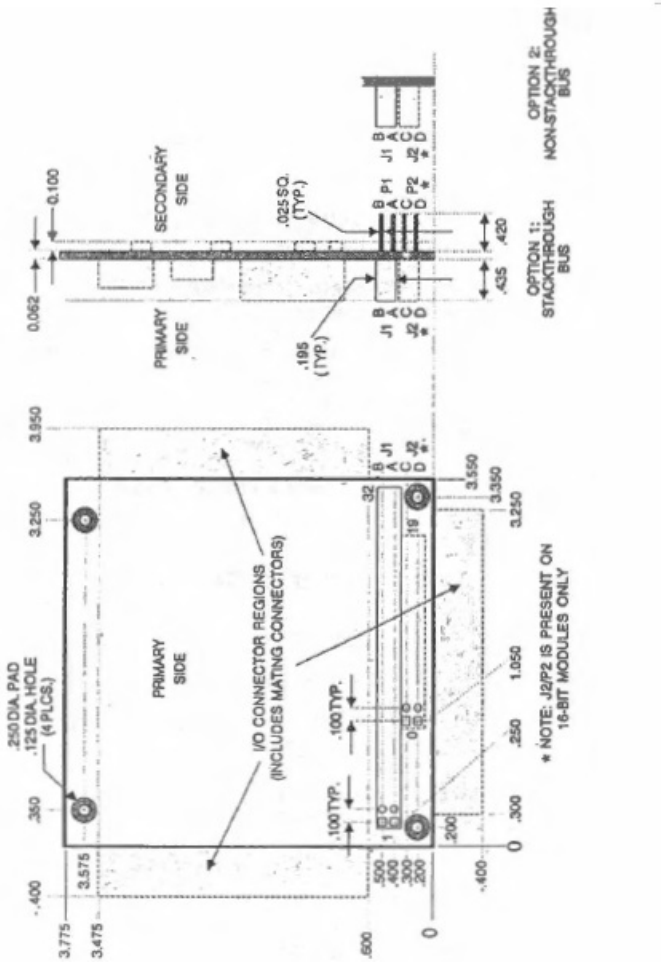


Figure 1. PC/104 Module Dimensions (Dimensions are in inches, ±.005)

HOW TO USE WATCHDOG

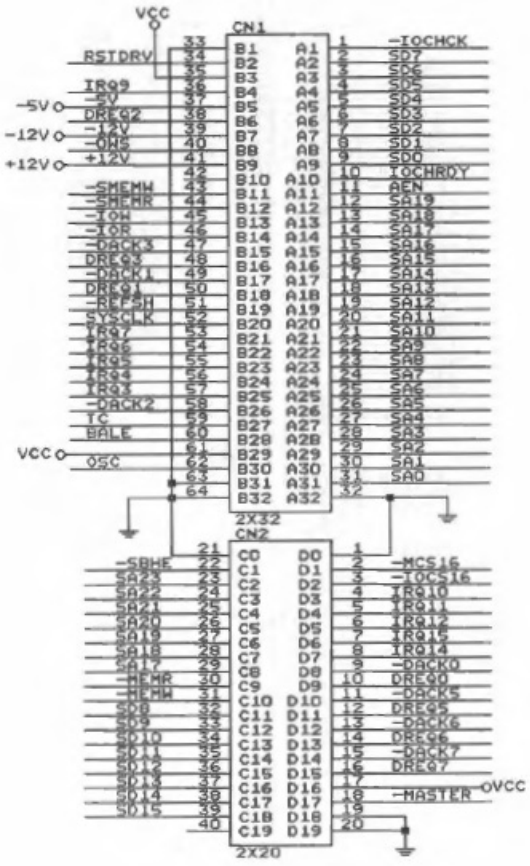
- Enable and Retrigger the Watch-Dog timer : 443 H
- Disable : 43 H

EX. 1 : For DOS
Execute the DEBUG.EXE file under DOS, Then key-in 1443. The system will reboot automatically according to the time-out of you set For example, if you want to Set 4 seconds for the time-out, you should set JP2 :7-8 ON and JP18 :1-2 ON to enable watch-dog timer.
C:\DOS> DEBUG
-443

EX.2: For assemble Language
Enable :
MOV DX,443H
IN AL,DX:
Disable :
IN AL,43H:

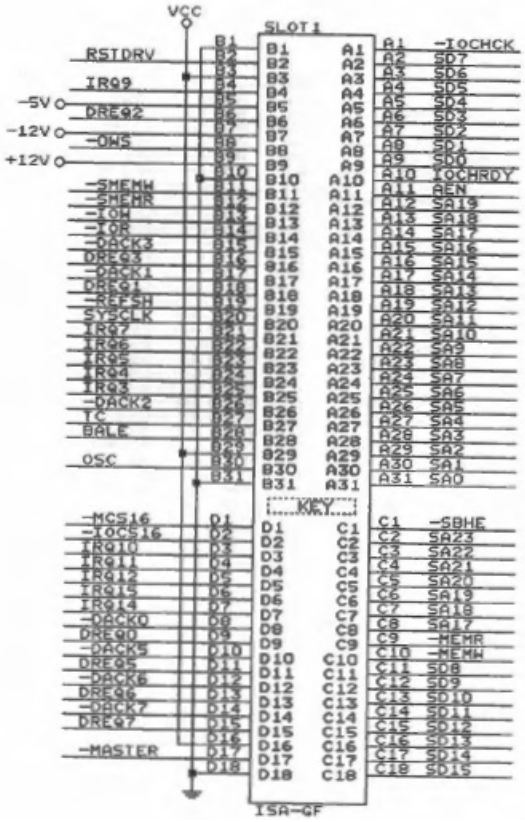
EXPANSION BUS PIN ASSIGNMENTS

PC/104 EXPANSION Bus

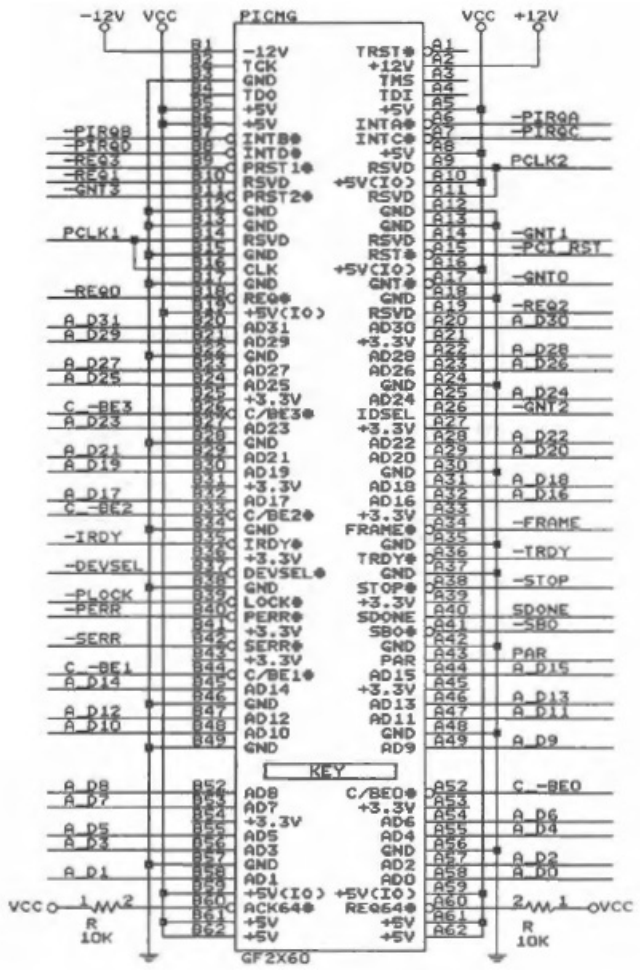


PICMG Bus

ISA of PICMG



PCI of PICMG



TECHNICAL REFERENCE

I/0 PORT ADDRESS MAP

Address	Function
000-01F	OMA Controller #1
020-03F	Interrupt Controller #2
040-0SF	Timer Chip
043	Disable Watch-Dog Times Operation (Read)
060-00F	Keyboard Controller
070-07F	Read Time Clock/NM! Mask
080-09F	DMA Page Register
0A0-0BF	Interrupt Controller #2
0C0-0DF	DMA Controller #2

0F0-0F1	Clear/Reset Math Coprocessor
1F0-1F7	Fix Disk Controller
200- 210	Game Port
278-27F	Parallel Port #2
2E8-2EF	Serial Port #4 (COM 4)
2F8-2FF	Serial Port #2 (COM 2)
300- 31F	prototvpe Card/Streaming Tape Adapter
360-36F	PC Network
378-3FF	Parallel Port #1
380-38F	SDLC#2
3A0-3AF	SDLC#1
3B0-3BF	MDA Video Card (Including LPT0)
3C0-3CF	EGA Card
3D0-3DF	CGACard
3E8-3EF	Serial Port #3 (COM 3)
3F0-3F7	Floppy Disk Controller
3F8-3FF	Serial Port #1 (COM 1)
443	Enable Watch-dog Timer Operation (read)

MEMORY ADDRESS MAP

Address Range (Hex}	Description
00OO00H – 09FFFFH	640 KBvte Conventional RAM
0A00OOH – 0BFFFFH	128 KByte of Video RAM
OCOO00H – 0DFFFFH	128 KByte of 1/0 Expansion ROM
0E0000H – 0FFFFFH	128 KByte System BIOS ROM
100000H – 7FFFFFH	1 MB-128 MB of User RAM
FF0000H – FFFFFFH	Duplicated 64 KB system BIOS ROM at 0FOOOOH

OMA CHANNELS

CHANNEL	Function
DMA0	Reserved
DMA1	Reserved
DMA2	Floppy Disk Controller
DMA3	ECP Parallel Port
DMA4	Cascade for DMA #1
DMA5	Reserved
DMA6	Reserved
DMA7	Reserved

INTERRUPT CONTROLLER

IRQ#	Function
IRQO	System timer output
IRQ 1	Keyboard
IRQ2	Cascade for INTC #2
IRQ3	Serial port #2
IRQ4	Serial port #1
IRQ5	Parallel port #2
IRQ6	Floopy disk controller
IRQ7	Parallel port #1
IRQ8	Real time clock
IRQ9	Software redirected to INT OAH (IRQ 2)
IRQ 10	Reserved
IRQ 11	Reserved
IRQ 12	PS/2 Mouse
IRQ 13	Math Coprocessor 80387DX
IRQ 14	Hard disk controller
IRQ 15	Reserved
NMI	Parity Check Error

Terms and Conditions

Warranty Policy

1. All products are warranted against defects in materials and workmanship for a period of two years from the date of purchase by the customer.
2. The buyer will bear the return freight charges for goods that are returned for repair within the warranty period whereas manufacturer will bear the other way after repair.
3. The buyer will pay for repair (replaced materials plus service time) and transportation charges (both ways) for items after the expiration of the warranty period.
4. If the RMA Service Request Form does not meet the stated requirement as listed on “RMA Service” , RMA goods will be returned at the customer expense.
5. The following conditions are excluded from this warranty :
   A. Improper or inadequate maintenance by the customer.
   B. Unauthorized modification or misuse.

C. Operation outside of the environmental specifications for the product.

RMA Service

Request a RMA#:
Complete and fax to Supplier the “RMA Request Form” at this manual to obtain a RMA number.

Shipping:

- The customer is requested to fill up the problem code as listed .If none of the code is selected, please write the symptom description on the remark.
- Ship the defective units with freight prepaid.
- Mark the RMA # clearly on the box .
- Shipping damage as a result of inadequate packing is the customer’s responsibility.
- Use the original packing materials whenever possible .

All RMA# an, valid for 30 days only:
When RMA goods are received after valid RMA# period , the goods will be rejected.

TRADEMARKS
Pentium is a registered trademark of Intel Corporation.
The Products mentioned in this manual are mentioned for identification purposes only. All names of products or services appearing in this manual are the trademarks or registered trademarks of their respective organizations and companies.

Documents / Resources

	IAC AP-5200IF Pentium CPU Card [pdf] User Manual AP-5200IF Pentium CPU Card, AP-5200IF, Pentium CPU Card, CPU Card, Card

References

- User Manual