

HS-6300

BX Dual Pentium[®] II/III LAN/VGA I.S.B.

- Full Size • All-in-one • VGA/Flat-Panel Interface • DMA33-IDE •
 - LAN • ATX Power • WDT • DOC • CTA • USB •
- IrDA PICMG Bus Industrial Single Board Computer •

HS-6300V

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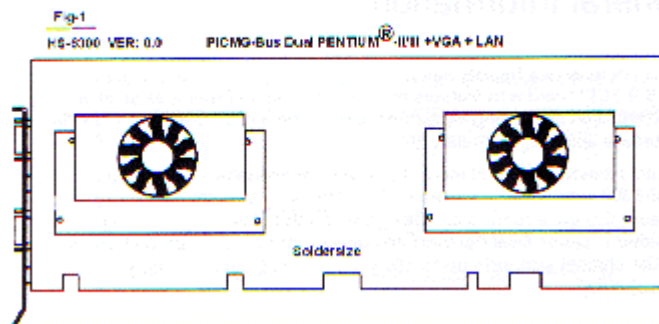
Contents

HS-6300.....	1
CAUTION OF PENTIUM® II/III PROCESSOR MODULE INSTALLATION	錯誤! 尚未定義書籤。
GENERAL INFORMATION	錯誤! 尚未定義書籤。
1.1 MAJOR FEATURES.....	5
1.2 SPECIFICATIONS.....	錯誤! 尚未定義書籤。
1.3 DELIVERY PACKAGE.....	錯誤! 尚未定義書籤。
GENERAL INSTALLATION	6
2.1 CAUTION OF STATIC ELECTRICITY	6
2.2 CAUTION ON UNPACKING AND BEFORE INSTALLATION.....	錯誤! 尚未定義書籤。
2.3 HS-6300'S LAYOUT	錯誤! 尚未定義書籤。
2.4 QUICK LISTING OF JUMPERS.....	錯誤! 尚未定義書籤。
2.5 QUICK LISTING OF CONNECTORS	12
2.6 JUMPER SETTING DESCRIPTION.....	錯誤! 尚未定義書籤。
2.7 MANUFACTURE DEFAULT SETTING.....	14
2.8 SETTING THE CPU'S PROCESSOR CORE FREQUENCY & CPU BASE CLOCK....	14
2.9 DISKONCHIP™ ADDRESS SETTING	18
2.10 WATCH-DOG TIMER.....	12
2.11 USB PORTS CONNECTOR	錯誤! 尚未定義書籤。
2.12 SETTING THE RTC CONFIGURATION.....	14
2.13 SYSTEM MEMORY DRAM.....	14
2.14 PCI VGA CONTROLLER	18
CONNECTION.....	15
3.1 POWER CONNECTOR	15
3.2 IDE'S LED, KEYLOCK AND RESET BUTTON.....	16
3.3 EXTERNAL SPEAKER	17
3.4 PS/2 POWER ON/OFF CONTROL	17
3.5 PCI E-IDE DRIVE CONNECTOR	18
3.6 PARALLEL PORT CONNECTOR	19
3.7 THE FLOPPY DISK DRIVE CONNECTOR.....	19
3.8 SERIAL PORTS CONNECTORS	20

3.9 KEYBOARD CONNECTORS.....	20
3.10 PS/2 MOUSE 6-PIN MINI-DIN CONNECTOR	21
3.11 VGA CONNECTORS	21
3.12 FLAT-PANEL CONNECTOR	21
3.13 IR CONNECTOR.....	21
3.14 FAST ETHERNET CONNECTOR.....	21
AWARD BIOS SETUP.....	22
4.1 MAIN MENU	23
4.2 STANDARD CMOS SETUP	24
4.3 BIOS FEATURES SETUP	25
4.4 CHIPSET FEATURES SETUP	26
4.5 INTEGRATED PERIPHERALS	27
4.6 POWER MANAGEMENT SETUP	28

Caution of Pentium®-II /III Processor Module Installation

Please following up 3 steps of Fig-1, Fig-2 & Fig-3



Chapter-1

General Information

The HS-6300 is a PICMG Bus Dual Pentium® II/III Industrial Single Board CPU Card with features combine together to make it as an ideal add-in-one industrial single board computer, enhanced I/O effects and VGA interface and Intel® 82558B LAN.

With on board DMA33 of mode 4 to IDE drive interface architecture, the HS-6300 supports with maximum 33.3MB/sec in data transfer rating to 4 pieces IDE drive connection. Design with Intel® 82443BX core logic VGA chipset supports up to 1024 x 768 6535 colors display resolution.

The advanced PICMG Bus add-on connection of HS-6300 allows user could easily obtain both ISA's 16bit and PCI's 32bit full set signals from a full size operating. The HS-6300 provides with four pieces 168pin DIMM sockets that supports up to 2GB of main system memory.

A single Flash chip holds the system BIOS, and you can change the Flash BIOS by the Utility Update. Advanced USB and IR ports also provide for faster and easily in data transmission. You can also use the DOS version of the DiskOnChip™ socket by issuing commands from the DOS prompt without the necessity of other software supports up to 144MB.

If a non-expect program cause halts, the on board Watch-Dog Timer will automatically reset the CPU or generate an interrupt. The Watch-Dog is designed with hardware only and doesn't need any arithmetical functions of a real-time clock chip. This ensures the reliability in an unmanned or standalone system.

1.1 Major Features

- ✓ PICMG Bus supported.
- ✓ Two Slot 1 sockets for Dual Intel® Pentium® II/III Processors.
- ✓ Intel® 82443 BX chipset.
- ✓ Intel® 82558B LAN chip on board.
- ✓ Four pieces DIMM sockets supports DRAM & SDRAM up to 2GB.
- ✓ Fast PCI DMA33 controller supports four IDE drives include large hard disks, CD-ROM and tape backup etc.
- ✓ PnP I/O address & IRQ selection.
- ✓ On board W83977 super I/O chipset.
- ✓ Two high speed RS-232 serial ports with 16C550 UART 16byte FIFO.
- ✓ One enhanced bi-directional parallel port supports SPP/EPP/ECP.
- ✓ On board PS/2 Keyboard and PS/2 Mouse connector.
- ✓ On board C&T 69000 SVGA adapter.
- ✓ DiskOnChip™ socket supports memory size up to 144MB.
- ✓ BIOS level pre-scale setting of the CPU Temperature Alarm supported.

1.2 Specifications

- ✓ CPU : One or two pieces Intel® Pentium® II/III 233MHz higher.
- ✓ Bus Interface : PICMG Bus.
- ✓ Chipset : Intel® 82443 BX.
- ✓ Data Bus : 64bit.
- ✓ Processing Ability : 64bit.
- ✓ CRT SVGA Controller : C&T 69000 chipset with 2MB memory supports CRT up to 1024x768 256 colors.
- ✓ PCI Enhanced IDE Interfaces : Four IDE drives supports modes 3/4 with DMA 33 function provide data transfer rate up to 33MB/sec.
- ✓ RAM Memory : Four pieces 168pin DIMM sockets provide up to 2GB.
- ✓ LAN : Intel® 82558B 100 Based LAN.
- ✓ Cache Memory : Slot 1 socket supports Intel® Pentium® II/III CPU with build-in 512KB Pipeline burst cache memory.
- ✓ Floppy Disk Drive Interface : Supports up to two floppy disk drives.
- ✓ Parallel Port : One bi-directional parallel port. Supports SPP/ECP/EPP.
- ✓ Serial Ports : Two RS-232 ports. Both use 16C550 UART with 16byte FIFO.
- ✓ BIOS : Award Flash BIOS.
- ✓ Watch-Dog Timer : Hardware circuit can be set by 1, 2, 10, 20, 110, 220 seconds period reset or NMI were generated when CPU did not periodically trigger the timer.
- ✓ DMA Channels : 7
- ✓ Interrupt Levels : 15
- ✓ Keyboard : 6-pin mini din connector or 5-pin header supports standard PC/AT keyboard.
- ✓ Mouse : 6-pin mini din connector support PS/2 mouse.
- ✓ USB : Supports 2 USB header.
- ✓ IR Interface : Supports one IrDA TX/RX header.
- ✓ Flash Memory Disk : Socket for DiskOnChip™ support up to 144MB Flash memory disk.
- ✓ Extra Power : Provides one ATX power input connector.

-
- ✓ CMOS : Real-time clock/calendar and battery backup by DS12B887 or equivalent device.
 - ✓ Power Supply Voltage : +5V(4.75 to 5.25V), +12V, -12V.
 - ✓ Max. Power Requirement : [+5V@22A\(350MHz\)](#), [+12V/-12V@20mA](#).
 - ✓ Operating Temperature : 0-55°C (CPU need cooler).
 - ✓ Board Size : 13.26"(L) x 4.8"(W) (337mm x 122mm).

1.3 Delivery Package

The Delivery package of HS-6300 includes all following items :

- HS-6300 Industrial Single Board
- One Printer Port Flat Cable
- One COM Port Flat Cable
- Two IDE Port Flat Cable
- FDD Port Flat Cable
- One PS/2 to Standard Keyboard Transfer Cable
- VGA Utility Diskette
- LAN Utility Diskette
- User's Manual

Please contact with your dealer if any each of these items is missing or damaged when purchasing. And please keep all parts of the delivery package with packing materials in case of you want to ship or store the product in future.

Chapter-2

Hardware Installation

This chapter provides the information on how to install the hardware of HS-6300. At first, please follow up sections 1.3, 2.1 and 2.2 in check the delivery package and carefully unpacking. Following after, the jumpers setting of switch, Watch-Dog Timer and the DiskOnChip™ address selection etc.

2.1 Caution of Static Electricity

The HS-6300 has been well package with an anti-static bag in protect its sensitive computer components and circuitry from the damage of static electric discharge.

Note : DO NOT TOUCH THE BOARD OR ANY OTHER SENSITIVE COMPONENTS WITHOUT ALL NECESSARY ANTI-STATIC PROTECTION.

You should follow the steps as following to protect the board in against the static electric discharge whenever you handle the board :

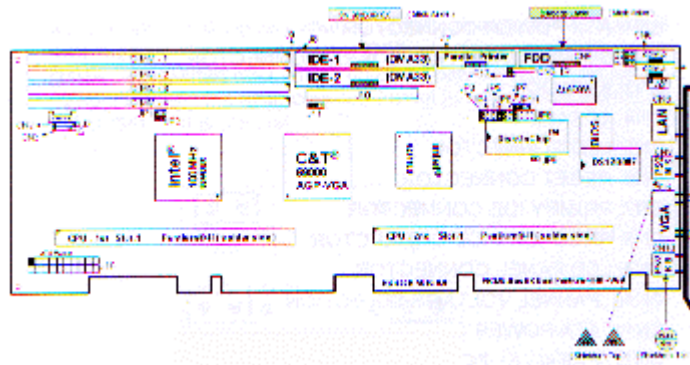
1. Please use a grounding wrist strap on whoever needs to handle the HS-6300. Well clip the ALLIGATOR clip of the strap to the end of shielded wire lead from a grounded object. Please put on and connect the strap before handle the HS-6300 for harmlessly discharge any static electricity through the strap.
2. Please use anti-static pad for put any components or parts or tools on the pad whenever you work on them outside the computer. You may also in use the anti-static bag instead the pad. Please ask from your local supplier in help up your necessary parts on anti-static requirement.

2.2 Caution on Unpacking and Before Installation

First of all, please follow with all necessary steps of section 2.1 in protection the HS-6300 from electricity discharge. With refer to section 1.3, please check the delivery package again with following steps :

1. Unpacking the HS-6300, keep well storage of all packing material, manual and diskette etc.
2. Is there any components lose or drop from the board ? DO NOT INSTALL IF IT HAPPENED.
3. Is there any visual damaged of the board ? DO NOT INSTALL IF HAPPENED.
4. Well check from your optional parts (i.e. CPU, SRAM, DRAM, ROM-Disk etc.) for completed setting all necessary jumpers setting to jumper pin-set and CMOS setup correctly. Please also reference to all information of jumpers setting in this manual.
5. Well check from your external devices (i.e. Add-On-Card, Driver Type etc.) for completed add-in or connection and CMOS setup correctly. Please also reference to all information of connector connection in this manual.
6. Please keep all necessary manual and diskette in a good condition for your necessary re-installation if you change your Operating System or whatever needs.

2.3 HS-6300's Layout



2.4 Quick Listing of Jumpers

- JP1 IOQ DEPTH Select
- JP2 Base Clock
- JP3 Clock Ratio Select
- JP4 Clock Ratio Select
- JP5 Clock Ratio Select
- JP6 Clock Ratio Select
- JP7 D.O.C Address setting
- JP8 Time of Watch-Dog
- JP9 ATX Power ON JMP
- JP10 Watch-Dog Active Select
- JP11 CMOS Clear
- JP12 USB 0 Connector
- JP13 USB 1 Connector
- JP14 LAN Enable/Disable
- JP15 VGA Enable/Disable

2.5 Quick Listing of Connectors

- CN1 : ATX Power Connector
- CN2 : 5-pin Header Keyboard Connector
- CN3 : Keylock
- CN4 : Speaker
- CN5 : LED Connector
- CN6 : Reset Connector
- CN7 : Primary IDE Connector
- CN8 : Secondary IDE Connector
- CN9 : LCD Panel Connector
- CN10 : Panel Voltage Selection
- CN11 : ATX Power & AT Power Selector
- CN12 : Parallel Port
- CN13 : FDD Connector
- CN14 : COM2 (5x2 Header)
- CN15 : COM1 (5x2 Header)
- CN16 : 10/100 Based LAN Connector
- CN17 : Mini-Din PS/2 Mouse Connector
- CN18 : VGA Connector
- CN19 : Mini-Din PS/2 Keyboard Connector
- CN20 : COM Port 1 (DB9)
- CN21 : COM Port 2 (DB9)
- CN22 : IR Connector
- CN23 、 CN24 : FAN

2.6 Jumper Setting Description

A jumper pin-set is ON as a shorted circuit with a plastic cap inserted over two pins. A jumper pin-set is OFF as an open circuit with a plastic cap inserted over one or no pin between pins. The below figure 2.2 shows the examples of different jumper pin-set setting as ON or OFF in this manual.

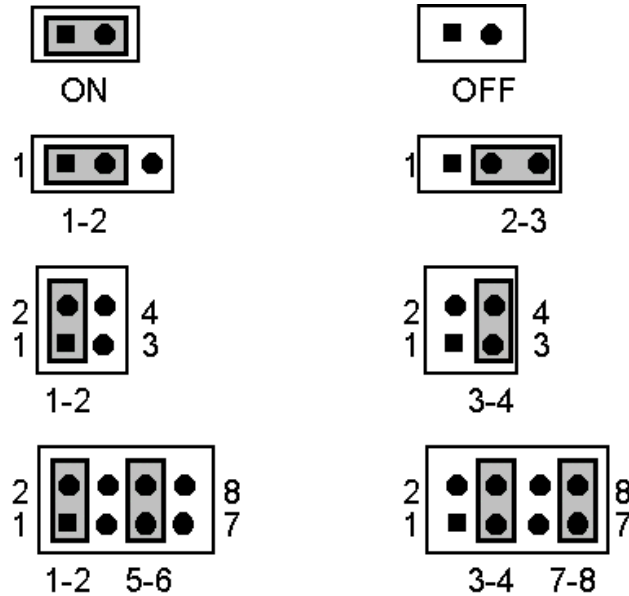


Figure 2.2

All jumper pin-set already has its default setting with the plastic cap inserted as ON, or without the plastic cap inserted as OFF. The default setting may reference in this manual with a "*" symbol in front of the selected item.

2.7 Manufacture Default Setting

The HS-6300 has an on board manufacture default setting of JP1 as following :

- **Default Setting of JP1 :**

IOQ Depth Setting	JP1
IOQ Depth of 4	*OFF
IOQ Depth of 1	ON

2.8 Setting the CPU's Processor Core Frequency & CPU Base Clock

- **JP2 the CPU Base Clock :**

CPU Clock In	JP2
66MHz	ON
*100MHz	OFF

- **CPU's Processor Core Frequency Setting of Jp3 ~JP6 :**

Processor Core Frequency	JP3	JP4	JP5	JP6
2.5x	ON	ON	OFF	ON
3.0x	ON	OFF	ON	ON
*3.5x	ON	OFF	OFF	ON
4.0x	OFF	ON	ON	ON
4.5x	OFF	ON	OFF	ON
5.0x	OFF	OFF	ON	ON
5.5x	ON	ON	OFF	ON
7.0x	ON	OFF	OFF	ON

2.9 DiskOnChip™ Address Setting

The HS-6300 provides a U22 socket for install the DiskOnChip™ module.

A JP7 (pin 1-2, 3-4) may select the starting memory address of the DiskOnChip™ for avoid the mapping area with any other memory devices. If you have another extra memory devices in the system with the same memory, neither the HS-6011 nor the extra memory devices will function normally. Please setting both at different memory address mapping.

- **JP7 : DiskOnChip™ Address**

Memory Address Mapping	JP7 3-4	JP7 1-2
D000	*OFF	*ON
D800	ON	OFF

(*) : default setting

The D.O.C. function allows the system is in using without FDD or HDD. The D.O.C. may formatting as driver C: or driver A:. User may also easily uses the DOS's commands such as FORMAT, SYS, COPY, XCOPY, DISCOPY and DISKCOMP etc. This is means that the D.O.C. may uses as driver A if the system without FDD-A for ambient application. Please contact with your supplier for different size D.O.C. module.

2.10 Watch-Dog Timer

There are three access cycles of Watch-Dog Timer as Enable, Refresh and Disable. The Enable cycle should proceed by READ PORT 443H. The Disable cycle after a first Enable cycle means Refresh.

Once if the Enable cycle activity, a Refresh cycle is request before the time-out period for restart counting the WDT's period. Otherwise, it will assume that the program operation is abnormal when the time counting over the period preset of WDT Timer. A system reset signal to start again or a NMI cycle to the CPU comes if over.

The JP8 is using for select the active function of Watch-Dog Timer in disable the Watch-Dog Timer, or presetting the Watch-Dog Timer activity at the reset trigger, or presetting the Watch-Dog Timer activity at the NMI trigger.

- **JP8 : Time of Watch-Dog**

Period	1-2	3-4	5-6	7-8
*1 sec	OFF	OFF	ON	OFF
2 sec	OFF	OFF	ON	ON
10 sec	OFF	ON	OFF	OFF
20 sec	OFF	ON	OFF	ON
110 sec	ON	OFF	OFF	OFF
220 sec	ON	OFF	OFF	ON

- **JP10 : Watch-Dog Active Type Setting**

JP8	Description
*1-2	System Reset
2-3	Active NMI
OFF	Disable

The Watch-Dog Timer is disabled after the system Power On. The Watch-Dog Timer can be enabled by a Enable cycle with reading the control port (443H), a Refresh cycle with reading the control port (443H) and a Disable cycle by reading the Watch-Dog Timer disable control port (043H). After a Enable cycle of WDT, user must constantly proceed a

Refresh cycle to WDT before its period setting comes ending of every 1, 2, 10, 20, 110 or 220 seconds. If the Refresh cycle does not active before WDT period cycle, the on board WDT architecture will issue a Reset or NMI cycle to the system.

The Watch-Dog Timer is controlled by two I/O ports.

443H	I/O Read	The Enable Cycle
443H	I/O Read	The Refresh Cycle
043H	I/O Read	The Disable Cycle

The following sample programs showing how to Enable, Disable and Refresh the Watch-Dog Timer :

```

WDT_EN_RF      EQU    0433H
WDT_DIS        EQU    0043H

WT_Enable      PUSH   AX           ; keep AX DX
                PUSH   DX
                MOV    DX,WDT_EN_RF ; enable the watch-dog timer
                IN     AL,DX
                POP    DX           ; get back AX, DX
                POP    AX
                RET

WT_Refresh     PUSH   AX           ; keep AX, DX
                PUSH   DX
                MOV    DX,WDT_ET_RF ; refresh the watch-dog timer
                IN     AL,DX
                POP    DX           ; get back AX, DX
                POP    AX
                RET

WT_DISABLE     PUSH   AX
                PUSH   DX
                MOV    DX,WDT_DIS   ; disable the watch-dog timer
                IN     AL,DX
                POP    DX           ; get back AX, DX
                POP    AX
                RET

```

2.11 USB Ports Connector

The HS-6300 provides two internal 8-pin USB ports connectors. Please refer to the following detail pin information.

- **JP12, JP13 : 8-pin Header USB Connector**

PIN No.	JP12	PIN No.	JP13
1	VCC	2	VCC
3	BD0-	4	BD1-
5	BD0+	6	BD1+
7	Ground	8	Ground

2.12 Setting the RTC Configuration

The HS-6300 provides a setting for the selection of the RTC Clear Jumper of JP4 setting as following :

- **JP11 : CMOS Setting**

JP11	CMOS Clear Jumper
*OFF	Normal
ON	Clear CMOS

2.13 System Memory DRAM

The HS-6300 provides a wide range on board DRAM memory by four pieces DIMM sockets request the access time should be 70 n-second or faster. The maximum capacity of the on board memory is 2GB.

See the figure on section 2.3 for get the identifying the banks.

2.14 PCI VGA Controller

The HS-6300 has built-in a C&T 69000 VGA Controller. If you want to use the external VGA Card, the BIOS will automatically disable the on board VGA controller and use the external one.

Video Modes

C&T 69000 Chipset with 2MB memory, support resolutions up to 1280x1024 256 colors.

To get more VGA drivers information, please refer to the Intel® Internet address : www.intel.com

- **JP14 : VGA Enable/Disable**

1-2	Enable
2-3	Disable

Chapter-3

Connection

This chapter gives all necessary information of the peripheral's connections, switches and indicators.

3.1 Power Connector

The HS-6300 provides one ATX power connector as following CN1 pin information. 20-pin ATX power connector.

3.2 IDE's LED, Keylock and Reset Button

The following provides the pin information for IDE's LED indicator, Keylock and Reset Button connections from CN3, CN5 and CN6.

- **CN3 : Power LED & Keylock**

PIN NO.	Description
1	Power LED Anode
2	NC
3	Ground
4	Keylock
5	Ground

- **CN6 : Reset Button**

PIN NO.	Description
1	External Reset
2	Ground

- **CN5 : IDE LED Connector**

PIN NO.	Description
1	+5V
2	HDD Active#

3.3 External Speaker

The HS-6300 has an on board buzzer. And it also provides the CN4 in allows user to connecting to the external speaker.

- **CN7 : Speaker Connector**

PIN NO.	Description
1	Speaker Signal
2	N/C
3	Ground
4	+5V

3.4 PS/2 Power ON/OFF Control

The HS-6300 reserved a JP9 for PS/2 Power ON/OFF Control.

- **JP9 : PS/2 Power ON/OFF Control**

JP9	Description	
1	Low	High
	Switch Power OFF	Switch Power ON
2	GND	

3.5 PCI E-IDE Drive Connector

Two standard 40-pin header daisy-chain driver connectors provide as CN11 & CN12 with following pin assignment. Total four IDE drivers may connect.

CN7(IDE 1) : Primary IDE Connector

CN8(IDE 2) : Secondary IDE Connector

- **CN7/CN8 : IDE Interface Connector**

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	RESET	2	GROUND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA 0	18	DATA 15
19	GROUND	20	N/C
21	N/C	22	GROUND
23	IOW#	24	GROUND
25	IOR#	26	GROUND
27	N/C	28	BALE - DEFAULT
29	N/C	30	GROUND# -DEFAULT
31	INTERRUPT	32	IOCS16#-DEFAULT
33	SA1	34	N/C
35	SA0	36	SA2
37	HDC CS0	38	HDC CS1#
39	HDD ACTIVE	40	GROUND

3.6 Parallel Port Connector

A standard 26-pin flat cable driver connector provides as CN12 with following pin assignment for connection to parallel printer.

- **CN12 : Parallel Port Connector**

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	STROBE	2	DATA 0
3	DATA 1	4	DATA 2
5	DATA 3	6	DATA 4
7	DATA 5	8	DATA 6
9	DATA 7	10	ACKNOWLEDGE
11	BUSY	12	PAPER EMPTY
13	PRINTER SELECT	14	AUTO FORM FEED
15	ERROR#	16	INITIALIZE
17	PRINTER SELECT LN#	18	GROUND
19	GROUND	20	GROUND
21	GROUND	22	GROUND
23	GROUND	24	GROUND
25	GROUND	26	GROUND

3.7 The Floppy Disk Drive Connector

A standard 34-pin header daisy-chain driver connector provides as CN13 with following pin assignment. Total two FDD drivers may connect.

- **CN13 : FDD Connector**

PIN NO	DESCRIPTION	PIN NO	DESCRIPTION
1	GROUND	2	REDUCE WRITE
3	GROUND	4	N/C
5	GROUND	6	N/C
7	GROUND	8	INDEX#
9	GROUND	10	MOTOR ENABLE A#
11	GROUND	12	DRIVE SELECT B#
13	GROUND	14	DRIVE SELECT A#
15	GROUND	16	MOTOR ENABLE B#
17	GROUND	18	DIRECTION#
19	GROUND	20	STEP#
21	GROUND	22	WRITE DATA#
23	GROUND	24	WRITE DATA#
25	GROUND	26	TRACK 0#
27	GROUND	28	WRITE PROTECT#
29	GROUND	30	READ DATA#
31	GROUND	32	SIDE 1 SELECT
33	GROUND	34	DISK CHANGE#

3.8 Serial Ports

The HS-5010 offers two high speed NS16C550 compatible UARTs with Read/Receive 16byte FIFO serial ports.

- **CN12 : Serial Port DB9 Connector**

PIN NO.	DESCRIPTION
1	Data Carrier Detect (DCD)
2	Receive Data (RXD)
3	Transmit Data (TXD)
4	Data Terminal Ready (DTR)
5	Ground (GND)
6	Data Set Ready (DSR)
7	Request To Send (RTS)
8	Clear To Send (CTS)
9	Ring Indicator (RI)

- **CN14/15 : Serial Port 10pin Header**

PIN NO.	Description	PIN No.	Description
1	DCD	2	DSR
3	RXD	4	RTX
5	TXD	6	CTX
7	DTR	8	RI
9	GND	10	NC

3.9 Keyboard Connector

The HS-6300 offers two possibilities for keyboard connections to external PS/2 type keyboard at CN19, or an internal 5-pin header at CN2.

- **CN2 : 5-pin Header Keyboard Connector**

PIN NO.	Description
1	Keyboard Clock
2	Keyboard Data
3	N/C
4	Ground
5	+5V

- **CN19 : 6pin Mini-din Keyboard Connector**

PIN NO.	Description
1	Keyboard Data
2	N/C
3	Ground
4	+5V
5	Keyboard Clock
6	N/C

3.10 PS/2 Mouse 6-pin Mini Din Connector

The HS-6300 provides an external PS/2 mouse connector at CN17 with following pin information.

- **CN17 : PS/2 Mouse Connector**

PIN NO.	Description
1	MS Data
2	N/C
3	Ground
4	+5V
5	KBT1
6	N/C

3.11 VGA Connector

The HS-6300 provides two possible connectives of VGA connections. One standard DB15 external VGA connector as following CN18 information.

- **CN18 : 15-pin Female VGA Connector**

PIN NO.	Description	PIN NO.	Description
1	Red	2	Green
3	Blue	4	N/C
5	Ground	6	Ground
7	Ground	8	Ground
9	N/C	10	Ground
11	N/C	12	N/C
13	HSYNC	14	VSYNC
15	N/C		

3.12 Flat-Panel Connector

The HS-6300 provides a 50-pin 2.0mm pitch header connector (CN9) for 3.3V Flat Panel connection with following pin assignment.

+12V	1	2	+12V
GND	3	4	GND
+3V PVcc	5	6	ENAVdd
FPVee	7	8	GND
P ₀	9	10	P ₁
P ₂	11	12	P ₃
P ₄	13	14	P ₅
P ₆	15	16	P ₇
P ₈	17	18	P ₉
P ₁₀	19	20	P ₁₁
P ₁₂	21	22	P ₁₃
P ₁₄	23	24	P ₁₅
P ₁₆	25	26	P ₁₇
P ₁₈	27	28	P ₁₉
P ₂₀	29	30	P ₂₁
P ₂₂	31	32	P ₂₃
P ₂₄	33	34	P ₂₅
SHFCLK	35	36	FLM
M	37	38	LP
GND	39	40	ENABKL
P ₂₆	41	42	P ₂₇
P ₂₈	43	44	P ₂₉
P ₃₀	45	46	P ₃₁
P ₃₂	47	48	P ₃₃
P ₃₄	49	50	P ₃₅

3.13 IR Connector

The HS-6300 provides a 5-pin internal IR communication connector as following CN19 pin information. The CN19 provides for IrDA 1.0 specification application.

- **CN22 : 5-pin IR Connector**

PIN NO.	Description
1	VCC
2	N/C
3	IRRX
4	Ground
5	IRTX

3.14 Fast Ethernet Connector

The Fast Ethernet controller provides with 32bit performance, PCI Bus master capability, and full compliance with IEEE 802.3 10/100 Based-T specifications.

For 10/100 Base-T operation, please connect the network connection by plugging one end of the cable into the 9-pin RF-45 CN16 connector.

- **CN16 : Ethernet Connector (9-pin RJ-45)**

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	TX+	2	TX-
3	RX+	4	NC
5	NC	6	RX-
7	NC	8	NC
9	Ground		

For indication out the LAN operating status, the board provides three LED indicators in show out the status at follows :

- LE1 : LED indicator lighting shows 10 Based data rating
- LE2 : LED indicator lighting shows 100 Based data rating
- LE4 : LED indicator lighting shows LAN in active

- **JP15 : LAN Enable/Disable**

OFF	Enable
ON	Disable

Chapter-4

AWARD BIOS Setup

The HS-6300 uses the Award PCI/ISA BIOS for the system configuration. The Award BIOS setup program is designed to provide the maximum flexibility in configuring the system by offering various options which could be selected for end-user requirements. This chapter is written to assist you in the proper usage of these features.

To access Award PCI/ISA BIOS setup program, press key. The main menu will be displayed at this time.

4.1 Main Menu

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

ROM PCI/ISA BIOS (2A69KD2B)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	HDD LOW LEVEL FORMAT
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit	(Shift)F2 : Change Color

Note that a brief description of each highlighted selection appears at the bottom of the screen.

4.2 Standard CMOS Setup

The Standard Setup is used for the basic hardware system configuration. The main function is for Data/Time and Floppy/Hard Disk Drive settings. Please refer to the following screen for the setup. When the IDE hard disk drive you are using is larger than 528MB, please set the HDD mode to LBA mode. Please use the IDE Setup Utility in BIOS Setup to install the HDD correctly.

ROM PCI/ISA BIOS (2A69KD2B)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Data (mm:dd:yy) : Fri, Oct 19 1999							
Time (hh:mm:ss) : 00:00:00							
		CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	:	Nono	0	0	0	0	AUTO
Primary Slave	:	Nono	0	0	0	0	AUTO
Secondary Master	:	Nono	0	0	0	0	AUTO
Secondary Slave	:	Nono	0	0	0	0	AUTO
Drive A	:	1.44M, 3.5in					
Drive B	:	None					
Video	:	AUTO					
Halt On	:	All Errors					
		Base Memory		:	640K		
		Extended Memory		:	64512K		
		Other Memory		:	384K		
		Total Memory		:	65536K		
ESC : Quit		↑↓→← : Select Item				PU/PD/ + / - : Modify	
F1 : Help		(Shift) F2: Change Color					

4.3 BIOS Features Setup

This section allows you to configure your system for the basic operation. You have the opportunity to select the system's default speed, boot up sequence, keyboard operation, shadowing and security.

ROM PCI/ISA BIOS (2A69KD2B)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

Virus Warning	: Disabled	Video BIOS	Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF	Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF	Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF	Shadow	: Disabled
Processor Number Feature	: Enabled	D4000-D7FFF	Shadow	: Disabled
Quick Power On Self Test	: Disabled	D8000-DBFFF	Shadow	: Disabled
Boot From LAN First	: Disabled	DC000-DFFFF	Shadow	: Disabled
Boot Sequence	: A, C, SCSI			
Swap Floppy Drive	: Disabled			
Boot Up Floppy Seek	: Enabled			
Boot Up NumLock Status	: On			
Gate A20 Option	: Fast			
Typematic Rate Setting	: Disabled			
Typematic Rate (Chars/Sec)	: 6			
Typematic Delay (Msec)	: 250			
Security Option	: Setup			
PCI/VGA Palette Snoop	: Disabled			
MPS Version Control For OS	: 1.1	ESC	: Quit	↑↓→←: Select Item
OS Select For DRAM > 64MB	: Non-OS2	F1	: Help	PU/PD/+/-: Modify
Report No FDD For WIN95	: Yes	F5	: Old Values	(Shift) F2 : Color
		G6	: Load BIOS Defaults	
		G7	: Load Setup Defaults	

4.4 Chipset Features Setup

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and the access to the system memory resources, such as DRAM and the external cache. It also coordinates the communications between the conventional ISA and PCI buses. It must be stated that these items should never be altered. The default settings have been chosen because they provide the best operating conditions for your system. You might consider and make any changes only if you discover that the data has been lost while using your system.

ROM PCI/ISA BIOS (2A69KD2B)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Auto Detect DIMM/PCI Clk	: Enabled
EDO DRAM Speed Selection	: 60ns	Spread Spectrum	: Disabled
EDO CAS# MA Wait State	: 2	Current CPU Temperature	: *35°C
EDO RAS# Wait State	: 1	Current CPU Temperature	: *35°C
SDRAM RAS-to-CAS Delay	: 3		
SDRAM RAS Precharge Time	: 3		
SDRAM CAS latency Time	: 3		
SDRAM Orecharge Control	: Disabled		
DRAM Date Integrity Mode	: Non-ECC		
System BIOS Cacheable	: Enabled		
Video BIOS Cacheable	: Enabled		
Video RAM Cacheable	: Enabled		
8 Bit I/O Recovery	: 1		
16 Bit I/O Recovery	: 1		
Memory Hole At 15M-16M	: Disabled		
Passive Release	: Enabled	ESC	: Quit
Delayed Transation	: Disabled	F1	: Help
AGP Aperture Size	: 64	F5	: Old Values
		F6	: Load BIOS Defaults
		F7	: Load Setup Defaults

4.5 Integrated Peripherals

The IDE hard drive controllers can support up to two separate hard drives. These drives have a master/slave relationship which is determined by the cabling configuration used to attach them to the controller. Your system supports two IDE controllers--a primary and a secondary--so you can install up to four separate hard disks.

PIO means Programmed Input /Output. Rather than having the BIOS issue a series of commands to affect the transfer to or from the disk drive, PIO allows the BIOS to tell the controller what it wants and then let the controller and the CPU perform the complete task by them. This is much simpler and more efficient (also faster).

ROM PCI/ISA BIOS (2A69KD2B)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Onboard Serial Port 2	: 2F8/IRQ3
IDE Primary Master PIO	: Auto	UART Mode Select	: Normal
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto	Onboard Parallel Port	: 378/IRQ7
IDE Secondary Slave PIO	: Auto	Parallel Port Mode	: SPP
IDE Primary Master UDMA	: Auto		
IDE Primary Slave UDMA	: Auto		
IDE Secondary Master UDMA	: Auto	LCD Panel Type	: Panel5
IDE Secondary Slave UDMA	: Auto		
On Chip Primary PCI IDE	: Enabled	ESC	: Quit
On Chop Secondary PCI IDE	: Enabled	F1	: Help
USB Keyboard Support	: Disabled	F5	: Old Values
Init Display First	: PCI Slot	F6	: Load BIOS Defaults
Power On Function	: Any Key	F7	: Load Setup Defaults
KB Power ON Password	: Enabled		
Hot Key Power ON	: Ctrl-F1		
KBC input clock	: 8 MHz		
On board FDC Controller	: Enabled		
Onboard Serial Port1	: 3F8/IRQ4		

4.6 Power Management Setup

The Power Management Setup allows user to configure the system for saving energy in a most effective way while operating in a manner consistent with his own style of computer use.

ROM PCI/ISA BIOS (2A69KD2B)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

ACPI function	: Enabled	** Reload Global Timer Events **	
Power Management	: User Define	IRQ3 [3-7, 9-15], NMI	: Disabled
PM Control by APM	: Yes	Primary IDE0	: Disabled
Video Off Method	: V/H Sync + Blank	Primary IDE1	: Disabled
Video Off After	: Standby	Secondary IDE0	: Disabled
Modem Use IRQ	: 3	Secondary IDE1	: Disabled
Doze Mode	: Disabled	Floppy Disk	: Disabled
Standby Mode	: Disabled	Serial Port	: Enabled
Suspend Mode	: Disabled	Parallel Port	: Disabled
HDD Power Down	: Disabled		
Throttle Duty Cycle	: 62.5%		
PCL/VGA Act-Monitor	: Disabled		
Soft-Off by PWR-BTTN	: Instant-Off		
Power On by Ring	: Enabled		
Resume by Alarm	: Disabled		
IRQ 8 Break Suspend	: Disabled		
		ESC	: Quit
		F1	: Help
		F5	: Old Values
		F6	: Load BIOS Defaults
		F7	: Load Setup Defaults
			↑↓→←: Select Item
			PU/PD/+/-: Modify
			(Shift) F2 : Color