User's Manual

3304110

Table of Contents

Safety Instructions

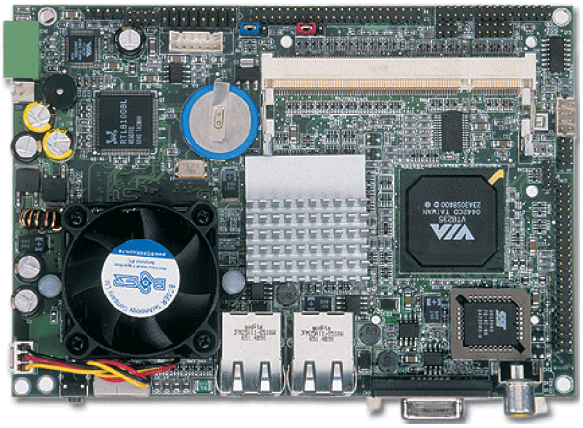
Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

- Do not remove boards or integrated circuits from their anti-static packaging until you are ready to install them.
- Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This helps to discharge any static electricity on your body.
- Wear a wrist-grounding strap, available from most electronic component stores, when handling boards and components. Fasten the ALLIGATOR clip of the strap to the end of the shielded wire lead from a grounded object. Please wear and connect the strap before handle the 3304110 to ensure harmlessly discharge any static electricity through the strap.
- Please use an anti-static pad when putting down any components or parts or tools outside the computer. You may also use an anti-static bag instead of the pad. Please inquire from your local supplier for additional assistance in finding the necessary anti-static gadgets.

NOTE: *DO NOT TOUCH THE BOARD OR ANY OTHER SENSITIVE COMPONENTS WITHOUT ALL NECESSARY ANTI-STATIC PROTECTIONS.*

Chapter 1

General Description



The 3304110 is a 133MHz FSB VIA CLE266/VT8235 chipset-based board designed for Mini PCI Local Bus VIA Eden 1GHz Embedded CPU. These features combine and make the 3304110 an ideal all-in-one industrial single board computer. Additional features include an enhanced I/O with CompactFlash reader, CRT/Panel, audio, dual LAN, TV-Out, 4 COM, and USB2.0 interfaces.

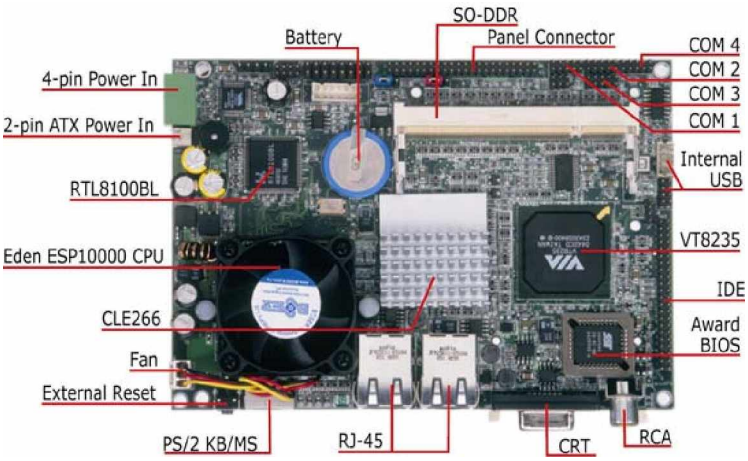
Its onboard ATA/33/66/100 to IDE drive interface architecture allows the 3304110 to support data transfers of 33, 66 or 100MB/sec. to one IDE drive connection. Designed with the VIA CLE266/VT8235 core logic chipset, the board supports VIA EDEN 1GHz Embedded CPU. The VIA CLE266 integrated S3 3D supporting CRT/Panel displays up to 1600 x 1200 at 32-bit.

3304110 offers CompactFlash reader in addition. +7~+26V wide range single DC power in can make 3304110 suitable for all kinds of environments even more.

System memory is also sufficient with the one 200-pin SO-DDR socket that can support up to 512MB.

Additional onboard connectors include four USB2.0 port providing faster data transmission. And two external RJ-45 connectors for 10/100 Based Ethernet use.

1.1 Major Features



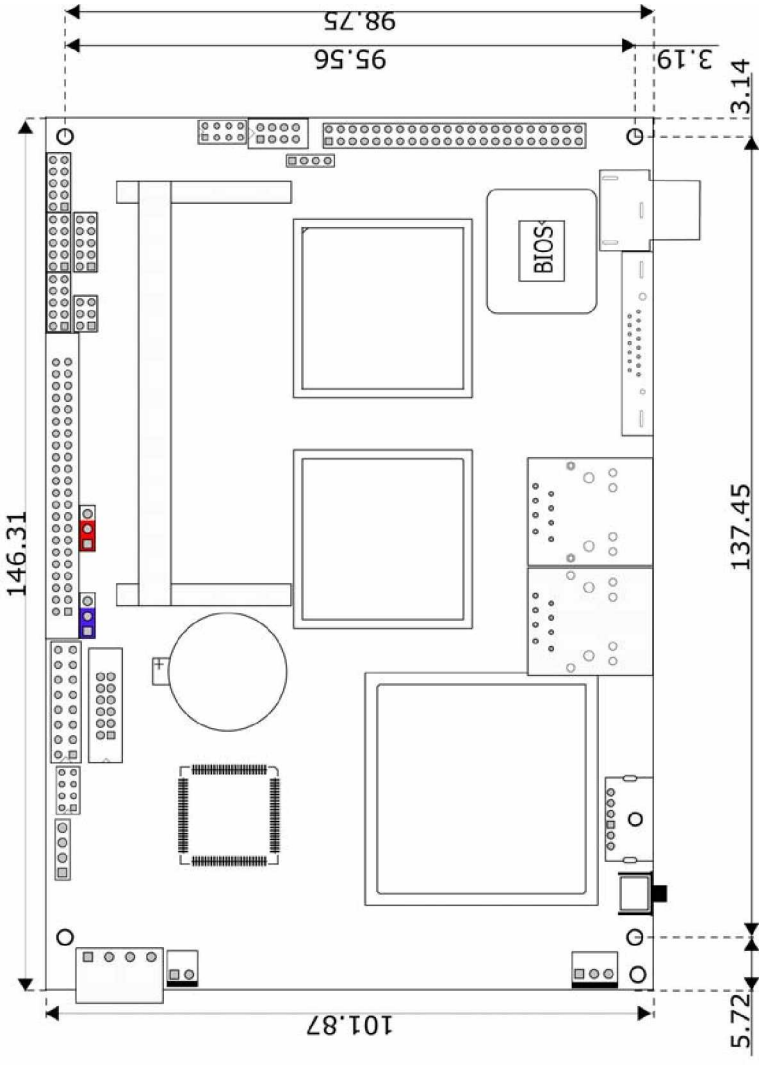
The 3304110 comes with the following features:

- VIA Eden ESP10000 1GHz embedded CPU
- Supports 133MHz FSB
- One SO-DDR socket with a max. capacity of 512MB
- VIA CLE266/VT8235 system chipset
- Winbond W83697UF super I/O chipset
- VIA CLE266 display controller
- Dual RealTek RTL8100BL LAN controller
- AC97 3D audio controller
- Fast PCI ATA/33/66/100 IDE controller
- CompactFlash card adapter, four COM, four USB2.0 ports
- TV-Out function (optional)

1.2 Specifications

- **CPU:** VIA Eden ESP10000 1GHz embedded CPU
- **Memory:** One SO-DDR socket supporting up to 512MB
- **Chipset:** VIA CLE266/VT8235
- **I/O Chipset:** Winbond W83697UF
- **CompactFlash:** One, Type II IDE interface adapter
- **PCI Slot:** One Type I mini PCI slot (optional)
- **VGA:** VIA CLE266 integrated S3 3D supporting AGP Bus and Hardware MPEG-2
- **TV-Out:** Supports PAL or NTSC TV systems (optional)
- **LAN:** Dual RealTek RTL8100BL 10/100 Based LAN
- **Audio:** AC97 3D audio controller
- **IDE:** Two IDE disk drive supporting ATA/33/66/100 and with transfer rates of 33/66/100MB/sec.
- **Serial Port:** 16C550 UART-compatible RS-232 x 4 serial ports with 16-byte FIFO
- **USB:** Four internal USB2.0 ports
- **Keyboard/Mouse:** PS/2 6-pin Mini DIN
- **BIOS:** Award PnP Flash BIOS
- **CMOS:** Battery backup
- **Power In:** +7~+26V wide range single DC power in
- **Temperature:** 0~+60°C
- **Dimensions:** 14.5(L) x 10.2(W) cm

1.3 Board Dimensions



Chapter 2

Unpacking

2.1 Opening the Delivery Package

The 3304110 is packed in an anti-static bag. The board has components that are easily damaged by static electricity. Do not remove the anti-static wrapping until proper precautions have been taken. Safety Instructions in front of this manual describe anti-static precautions and procedures.

2.2 Inspection

After unpacking the board, place it on a raised surface and carefully inspect the board for any damage that might have occurred during shipment. Ground the board and exercise extreme care to prevent damage to the board from static electricity.

Integrated circuits will sometimes come out of their sockets during shipment. Examine all integrated circuits, particularly the BIOS, processor, memory modules, ROM-Disk, and keyboard controller chip to ensure that they are firmly seated. The 3304110 delivery package contains the following items:

- 3304110 Board x 1
- Utility CD Disk x 1
- Cables package x 1
- Jumper Bag x 1
- User's Manual

Cables Package	
NO.	Description
1	4-pin power cable x 1
2	MIC/Audio cable x 1
3	8-pin USB split type cable x 1
4	One RS-232 cable x 4
5	PS/2 KB/MS transfer cable x 1
6	IDE flat cable x 1

It is recommended that you keep all the parts of the delivery package intact and store them in a safe/dry place for any unforeseen event requiring the return shipment of the product. In case you discover any missing and/or damaged items from the list of items, please contact your dealer immediately.

Chapter 3

Hardware Installation

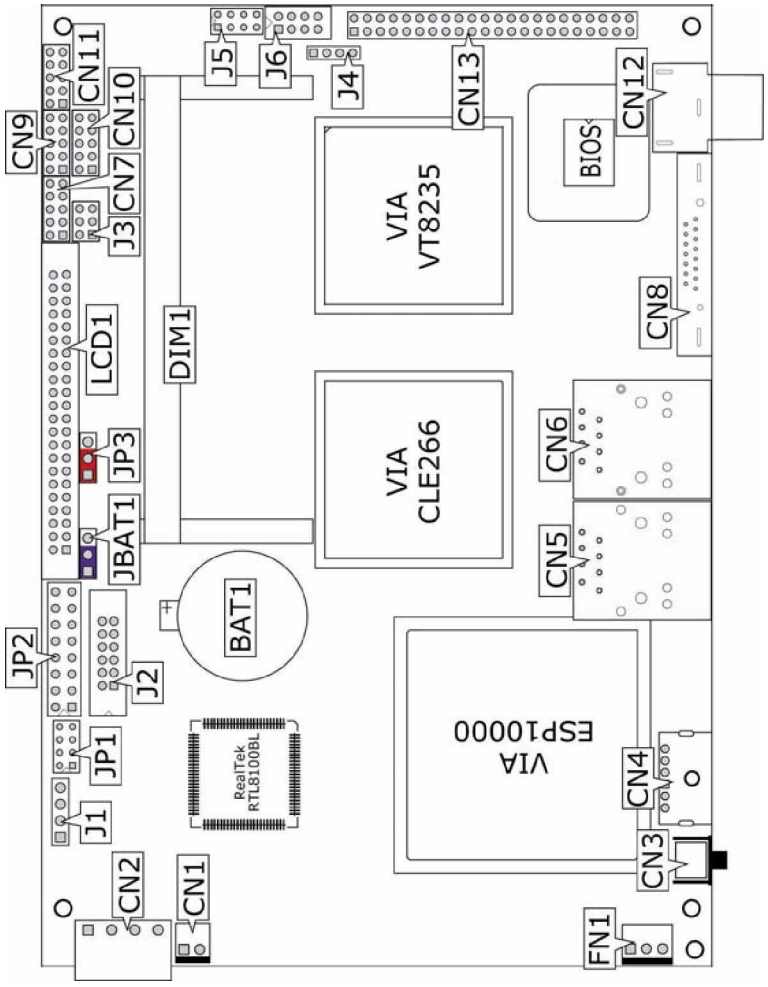
This chapter provides the information on how to install the hardware using the 3304110. This chapter also contains information related to jumper settings of switch, and the watchdog timer selection etc.

3.1 Before Installation

After confirming your package contents, you are now ready to install your hardware. The following are important reminders and steps to take before you begin with your installation process.

1. Make sure that all jumper settings match their default settings and CMOS setup correctly. Refer to the sections on this chapter for the default settings of each jumper.
2. Go through the connections of all external devices and make sure that they are installed properly and configured correctly within the CMOS setup. Refer to the sections on this chapter for the detailed information on the connectors.
3. Keep the manual and diskette in good condition for future reference and use.

3.2 Board Layout



3.3 Jumper List

Jumper	Default Setting	Setting	Page
JBAT1	Clear CMOS: *Normal Operation*	Short 1-2	10
JP3	Panel Voltage Select: *+3.3V*	Short 1-2	12

3.4 Connector List

Connector	Definition	Page
CN1	2-pin ATX Power Control	10
CN2	4-pin DC Power In Connector	10
CN3	External Reset Button	----
CN4	PS/2 6-pin Mini DIN KB/MS Connector	17
CN5/CN6	RJ-45 Connector	14
CN7	COM 1 Connector (5x2 header)	16
CN8	15-pin CRT Connector	12
CN9	COM 2 Connector (5x2 header)	16
CN10	COM 3 Connector (5x2 header)	16
CN11	COM 4 Connector (5x2 header)	16
CN12	RCA Connector	13
CN13	IDE Connector	15
CN14	CompactFlash Connector	20
DIM1	SO-DDR Socket	10
FN1	Fan Connector	10
J1	Line In Connector	14
J5/J6	USB Connector	17
JP1	MIC In/Audio Out Connector	14
JP2	System Front Panel Connector	11
LCD1	44-pin Panel Connector	12
PC1	Mini PCI Connector	18

3.5 Configuring the CPU

The 3304110 embedded with a VIA Eden ESP10000 1GHz embedded CPU, user don't need to adjust the frequently and check speed of the CPU.

The new VIA Eden ESP10000 processors based on the Nehemiah core build on the VIA Eden Platform lineup, enabling improved digital media performance with ultra low power consumption.

3.6 System Memory

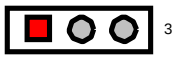
The 3304110 provides one 200-pin SO-DDR socket at locations *DIM1*. The maximum capacity of the onboard memory is 512MB.

3.7 CMOS Data Clear

The 3304110 has a Clear CMOS jumper on *JBAT1.*

z JBAT1: Clear CMOS

Options	Settings
Normal Operation (default)	Short 1-2
Clear CMOS	Short 2-3



IMPORTANT: *Before you turn on the power of your system, please set JBAT1 to Short 1-2 for normal operation.*

3.8 Power and Fan Connectors

3304110 provides one 4-pin power connectors at *CN2.* And one 2-pin ATX power in at *CN1*.

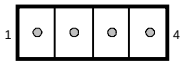
+7~+26V wide range single DC power in can make 3304110 suitable for all kinds of environments even more.

z CN1: 2-pin ATX Power Control

PIN	Description
1	PS_ON
2	5VSB

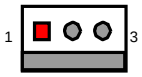
z CN2: 4-pin DC Power In Connector

PIN	Description
1	+7~+26V
2	GND
3	GND
4	+7~+26V



z FN1: Fan Connector

PIN	Description
1	GND
2	+5V
3	N/C



Connector *FN1* onboard 3304110 is a 3-pin fan power output connector. And 3304110 supports +5V Fan only.

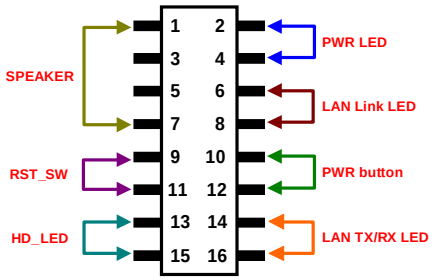
3.9 System Front Panel Connectors

The 3304110 has one LED at location *JP2* that indicates the power-on status. This visual feature of the IDE LED may also be connected to an external Speaker, Reset switch, HDD LED, Power LED, LAN Link LED, Power button, and LAN TX/RX LED via connector *JP2(1-3-5-7), JP2(9-11)*, *JP2(13-15)*, *JP2(2-4)*, *JP2(6-8)*, *JP2(10-12), and JP2(14-16)*.

z JP2: System Front Panel Connector

PIN	Description	PIN	Description
1	VCC	2	330Ω Pull +5V
3	GND	4	GND
5	N/C	6	LAN Link LED
7	Speaker	8	GND
9	GND	10	PW Button
11	Reset Switch	12	GND
13	330Ω Pull +5V	14	LAN TX/RX LED
15	HDD LED	16	GND

Connector JP2 Orientation

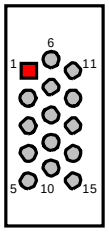


3.10 VGA Controller

The 3304110 provides two connection methods of a VGA device. *CN8* offers a single standard CRT connector while *LCD1* is the 44-pin panel connector. VIA CLE266 VGA chipset shared main memory 8/16/32MB, and provides high quality DVD video playback. 3304110 also provides Hardware MPEG-2.

z CN8: 15-pin CRT Connector

PIN	Description	PIN	Description
1	Red	2	Green
3	Blue	4	N/C
5	GND	6	GND
7	GND	8	GND
9	N/C	10	GND
11	N/C	12	SDA
13	HSYNC	14	VSYNC
15	SCL		

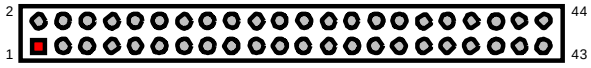


z LCD1: 44-pin Panel Connector

PIN	Description	PIN	Description
1	N/C	2	N/C
3	GND	4	GND
5	V_{LCD}	6	ENAVDD
7	ENAVEE	8	GND
9	GFPD0	10	GFPD1
11	GFPD2	12	GFPD3
13	GFPD4	14	GFPD5
15	GFPD6	16	GFPD7
17	GFPD8	18	GFPD9
19	GFPD10	20	GFPD11
21	GFPD12	22	GFPD13
23	GFPD14	24	GFPD15
25	GFPD16	26	GFPD17
27	GFPD18	28	GFPD19
29	GFPD20	30	GFPD21
31	GFPD22	32	GFPD23
33	N/C	34	N/C
35	SHFCLK	36	GFPVS

...More On Next Page...

PIN	Description	PIN	Description
37	GFPDEN	38	GFPHS
39	GND	40	FPBKLP
41	N/C	42	N/C
43	N/C	44	N/C



NOTE: *Please set the proper voltage of your panel using JP3 before proceeding on installing it.*

The 3304110 has an onboard jumper that selects the working voltage of the flat panel connected to the system. Jumper *JP3* offers two voltage settings for the user.

z JP3: Panel Voltage Select

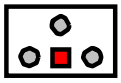
Options	Settings
+3.3V (default)	Short 1-2
+5V	Short 2-3

3.11 TV-Out Connector

3304110 can support TV-Out function which input could be up to 800 x 600 graphics resolutions. World Wide Video standards are supported including NTSC-M (North America, Taiwan), NTSC-J (Japan), PAL-B, D, G, H, I (Europe, Asia), PAL-M (Brazil), PAL-N (Uruguay, Paraguay) and PAL-NC (Argentina).

z CN12: RCA Connector (for TV-Out function)

PIN	Description	PIN	Description
1	SPDIFO	2	GND
3	GND	4	GND

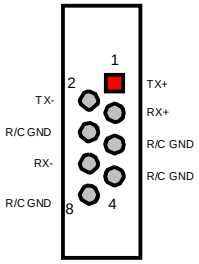


3.12 Ethernet Connector

The 3304110 provides two external RJ-45 interface connector. Please refer to the following for its pin information.

z CN5/CN6: RJ-45 Connector

PIN	Description
1	TX+
2	TX-
3	RX+
4	R/C GND
5	R/C GND
6	RX-
7	R/C GND
8	R/C GND

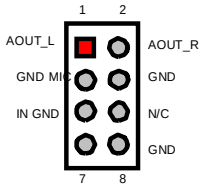


3.13 Audio Connectors

The 3304110 has an onboard AC97 3D audio interface. The following tables list the pin assignments of the MIC In/Audio Out and Line in connectors.

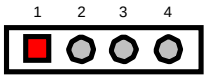
z JP1: MIC In/Audio Out Connector

PIN	Description	PIN	Description
1	AOUTL	2	AOUTR
3	GND	4	GND
5	MIC IN	6	N/C
7	GND	8	GND



z J1: Line In Connector

PIN	Description
1	Line In_R
2	GND
3	GND
4	Line In_L

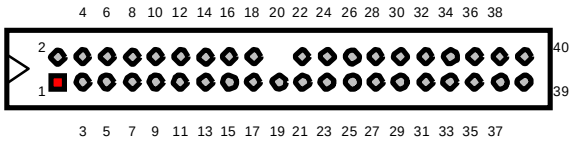


3.14 PCI E-IDE Drive Connector

CN13 is a standard 40-pin 2.0mm pitch connector daisy-chain driver connector serves the PCI E-IDE drive provisions onboard the 3304110. A maximum of two ATA/33/66/100 IDE drives can be connected to the 3304110 via *CN13*.

z CN13: IDE Connector

PIN	Description	PIN	Description
1	Reset	2	GND
3	Data 7	4	PDD8
5	Data 6	6	PDD9
7	Data 5	8	PDD10
9	Data 4	10	PDD11
11	Data 3	12	PDD12
13	Data 2	14	PDD13
15	Data 1	16	PDD14
17	Data 0	18	PDD15
19	GND	20	N/C
21	PDREQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	PIORDY	28	470Ω with GND
29	RPDACK-	30	GND
31	Interrupt	32	N/C
33	RPDA1-	34	PD33/66
35	RPDA0-	36	PDA2
37	RPCS1-	38	PDCS3#
39	HDD Active	40	GND

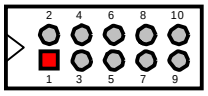


3.15 Serial Port Connectors

The 3304110 offers two NS16C550 compatible UARTs with Read/Receive 16-byte FIFO serial ports and four internal 10-pin connectors.

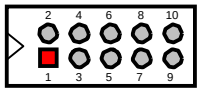
z CN7: COM1 Connector (5x2 Header)

PIN	Description	PIN	Description
1	DCD1	2	DSR1
3	RXD1	4	RTX1
5	TXD1	6	CTX1
7	DTR1	8	RI1
9	GND	10	N/C



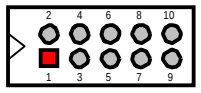
z CN9: COM2 Connector (5x2 Header)

PIN	Description	PIN	Description
1	DCD2	2	DSR2
3	RXD2	4	RTX2
5	TXD2	6	CTX2
7	DTR2	8	RI2
9	GND	10	N/C



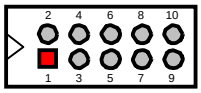
z CN10: COM3 Connector (5x2 Header)

PIN	Description	PIN	Description
1	DCD3	2	DSR3
3	RXD3	4	RTX3
5	TXD3	6	CTX3
7	DTR3	8	RI3
9	GND	10	N/C



z CN11: COM4 Connector (5x2 Header)

PIN	Description	PIN	Description
1	DCD4	2	DSR4
3	RXD4	4	RTX4
5	TXD4	6	CTX4
7	DTR4	8	RI4
9	GND	10	N/C

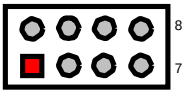


3.16 USB Connector

The 3304110 provides two 8-pin connectors, at location *J5* and *J6*, for four USB2.0 connections to the 3304110.

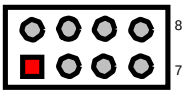
z J5: USB Connector

PIN	Description	PIN	Description
1	VCC	2	VCC
3	BD2-	4	BD3-
5	BD2+	6	BD3+
7	GND	8	GND



z J6: USB Connector

PIN	Description	PIN	Description
1	VCC	2	VCC
3	BD0-	4	BD1-
5	BD0+	6	BD1+
7	GND	8	GND

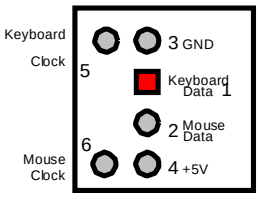


3.17 Keyboard/Mouse Connectors

The 3304110 offers two possibilities for keyboard/mouse connections. The connections are via *CN4* for an external PS/2 type keyboard/mouse.

z CN4: PS/2 6-pin Mini DIN Keyboard/Mouse Connector

PIN	Description
1	Keyboard Data
2	Mouse Data
3	GND
4	+5V
5	Keyboard Clock
6	Mouse Clock



3.18 Mini PCI Connector

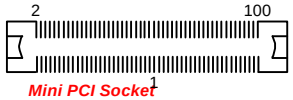
3304110 supports a Mini PCI connector. The peripheral component with standard Type1 Mini PCI can be used. For particular requirement, please refer to Mini PCI series product on website or contact with us.

z PC1: Mini PCI Connector

PIN	Description	PIN	Description
1	INTB#	2	5V
3	3.3V	4	INTA#
5	INTD#	6	INTC#
7	GND	8	N/C
9	CLK	10	RST#
11	GND	12	3.3V
13	REQ0#	14	GNT#
15	3.3V	16	GND
17	AD[31]	18	PME#
19	AD[29]	20	Reserved
21	GND	22	AD[30]
23	AD[27]	24	3.3V
25	AD[25]	26	AD[28]
27	REQ1#	28	AD[26]
29	C/BE[3]#	30	AD[24]
31	AD[23]	32	IDSEL
33	GND	34	GND
35	AD[21]	36	AD[22]
37	AD[19]	38	AD[20]
39	GND	40	PAR
41	AD[17]	42	AD[18]
43	C/BE[2]#	44	AD[16]
45	IRDY#	46	GND
47	3.3V	48	FRAME#
49	N/C	50	TRDY#
51	SERR#	52	STOP#
53	GND	54	3.3V
55	PERR#	56	DEVSEL#
57	C/BE[1]#	58	GND
59	AD[14]	60	AD[15]
61	GND	62	AD[13]

. . . More on next page . . .

PIN	Description	PIN	Description
63	AD[12]	**64**	AD[11]
65	AD[10]	**66**	GND
67	GND	**68**	AD[9]
69	AD[8]	**70**	C/BE[0]#
71	AD[7]	**72**	3.3V
73	3.3V	**74**	AD[6]
75	AD[5]	**76**	AD[4]
77	REQ3#	**78**	AD[2]
79	AD[3]	**80**	AD[0]
81	5V	**82**	GNT2#
83	AD[1]	**84**	GNT3#
85	GND	**86**	GND
87	N/C	**88**	N/C
89	N/C	**90**	N/C
91	N/C	**92**	N/C
93	N/C	**94**	N/C
95	N/C	**96**	REQ2#
97	N/C	**98**	GND
99	N/C	**100**	N/C



Mini PCI Socket pin orientation

3.19 CompactFlash™ Connector

The 3304110 also offers an optional CompactFlash™ connector which is IDE interface located at the solder side of the board (beneath the SO-DIMM connector). The designated *CN14* connector, once soldered with an adapter, can hold CompactFlash™ cards of various sizes. Please turn off the power before inserting the CD card.

z CN14: CompactFlash Connector

PIN	Description	PIN	Description
1	GND	26	N/C
2	SDD3	27	SDD11
3	SDD4	28	SDD12
4	SDD5	29	SDD13
5	SDD6	30	SDD14
6	SDD7	31	SDD15
7	-SDCS1	32	-SDCS3
8	GND	33	N/C
9	GND	34	-SDIOR
10	GND	35	-SDIOW
11	GND	36	4.7KΩ pull to VCC
12	GND	37	IRQ15
13	VCC	38	VCC
14	GND	39	N/C
15	GND	40	N/C
16	GND	41	10KΩ pull to VCC
17	GND	42	SHDRDY
18	SDA2	43	N/C
19	SDA1	44	4.7KΩ pull to VCC
20	SDA0	45	HDD LED
21	SDD0	46	4.7KΩ pull to VCC
22	SDD1	47	SDD8
23	SDD2	48	SDD9
24	470Ω pull to GND	49	SDD10
25	N/C	50	GND

Inserting a CompactFlash™ card into the adapter is not a difficult task. The socket and card are both keyed and there is only one direction for the card to be completely inserted. Refer to the diagram on the following page for the traditional way of inserting the card.

Chapter 4

Award BIOS Setup

The HS-7238S uses Award 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 that could be selected for end-user requirements. This chapter is written to assist you in the proper usage of these features.

4.1 Starting Setup

The Award BIOS is immediately activated when you first power on the computer. The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated in one of two ways:

1. By pressing <Del> immediately after switching the system on, or
2. By pressing the <Del> key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test).

Press DEL to enter SETUP.

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to...

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

4.2 Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PageUp> and <PageDown> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate the Setup program using the keyboard.

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
Esc key	Main Menu -- Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift)F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select color backward
F3 key	Calendar, only for Status Page Setup Menu
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

4.2.1 Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or the F1 key again.

4.3 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.

Phoenix – AwardBIOS CMOS Setup Utility

` Standard CMOS Features	Load Fail-Safe Defaults
` Advanced BIOS Features	Load Optimized Defaults
` Advanced Chipset Features	Set Supervisor Password
` Integrated Peripherals	Set User Password
` Power Management Setup	Save & Exit Setup
` PnP/PCI Configurations	Exit Without Saving
` Frequency/Voltage Control	
Esc Quit	ÇÈÆÅ Select Item
F10 Save & Exit Setup	
Load Fail-Safe Defaults	

NOTE: *A brief description of the highlighted choice appears at the bottom of the screen.*

4.4 Standard CMOS Features

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, you must set the HDD mode to **LBA** mode. Please use the IDE Setup Utility in BIOS SETUP to install the HDD correctly.

Phoenix – AwardBIOS CMOS Setup Utility
Standard CMOS Features

Date (mm:dd:yy)	Wed, Sep 15 2004	Item Help
Time (hh:mm:ss)	10 : 32 :57	Menu Level X
X IDE Primary Master	[None]	Change the day, month,
X IDE Primary Slave		year and century
X IDE Secondary Master		
X IDE Secondary Slave		
Video	[EGA/VGA]	
Halt On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	56320K	
Total Memory	57344K	

ÇÈÆÄ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.5 Advanced BIOS Features

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.

Phoenix – AwardBIOS CMOS Setup Utility
Advanced BIOS Features

Virus Warning	[Disabled]	Item Help
CPU Internal Cache	[Enabled]	Menu Level X
External Cache	[Enabled]	
CPU L2 Cache ECC Checking	[Enabled]	
Quick Power On Self Test	[Enabled]	
First Boot Device	[HDD-0]	
Second Boot Device	[CDROM]	
Third Boot Device	[HDD-1]	
Boot Other Device	[Enabled]	
Boot Up Numlock Status	[On]	
Gate A20 Option	[Fast]	
Typematic Tate Setting	[Disabled]	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	[Setup]	
MPS Version Control For OS	[1.4]	
OS Select For DRAM > 64MB	[Non-OS2]	
Video BIOS Shadow	[Enabled]	
Small Logo(EPA) Show	[Enabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.6 Advanced Chipset Features

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 making any changes only if you discover that the data has been lost while using your system.

Phoenix – AwardBIOS CMOS Setup Utility
Advanced Chipset Features

X DRAM Clock/Drive Control	[Press Enter]	Item Help
X AGP & P2P Bridge Control	[Press Enter]	Menu Level X
X CPU & PCI Bus Control	[Press Enter]	
Memory Hole	[Disabled]	
System BIOS Cacheable	[Enabled]	
Video RAM Cacheable	[Enabled]	
VGA Share Memory Size	[32M]	
Select Display Device	[CRT]	
TV_type	[NTSC]	
TV_Connector	[Auto Mode]	
TV_Layout	[Default]	
Panel Type	[00]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
DRAM Clock/Drive Control

Current FSB Frequency	133MHz	Item Help
Current DRAM Frequency	133MHz	Menu Level X
DRAM Clock	[By SPD]	
DRAM Timing	[By SPD]	
x DRAM CAS Latency	2.5	
x Bank Inter leave	Disabled	
x Precharge to Active(Trp)	3T	
x Active to Precharge(Tras)	6T	
x Active to CMD(Trcd)	3T	
DRAM Command Rate	[2T Command]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
AGP & P2P Bridge Control

	AGP Aperture Size	[64M]	Item Help
	AGP Mode	[4X]	Menu Level X
	AGP Driving Control	[Auto]	
x	AGP Driving Value	DA	
	AGP Fast Write	[Disabled]	
	AGP Master 1 WS Write	[Disabled]	
	AGP Master 1 WS Read	[Disabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
CPU & PCI Bus Control

	CPU to PCI Write Buffer	[Enabled]	Item Help
	PCI Master 0 WS Write	[Enabled]	Menu Level X
	PCI Delay Transaction	[Disabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.7 Integrated Peripherals

The IDE hard drive controllers can support up to two separate hard drives. These drives have a master/slave relationship that 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 themselves. This is much simpler and more efficient (also faster).

Phoenix – AwardBIOS CMOS Setup Utility
Integrated Peripherals

X VIA OnChip IDE Device	[Press Enter]	Item Help
X VIA OnChip PCI Device	[Press Enter]	Menu Level X
X Super IO Device	[Press Enter]	
GPIO Pin 8-11 I/O Program	[Input]	
x GPO 8 High/Low State	Low	
GPO 9 High/Low State	Low	
GPO 10 High/Low State	Low	
GPO 11 High/Low State	Low	
Init Display First	[PCI Slot]	
Onboard Serial Port 3	[3E8]	
Serial Port 3 Use IRQ	[IRQ10]	
Onboard Serial Port 4	[2E8]	
Serial Port 4 Use IRQ	[IRQ11]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
VIA OnChip IDE Device

OnChip IDE Channel0		[Enabled]	Item Help
OnChip IDE Channel1		[Enabled]	Menu Level X
IDE Prefetch Mode		[Enabled]	
Primary Master	PIO	[Auto]	
Primary Slave	PIO	[Auto]	
Secondary Master	PIO	[Auto]	
Secondary Slave	PIO	[Auto]	
Primary Master	UDMA	[Auto]	
Primary Slave	UDMA	[Auto]	
Secondary Master	UDMA	[Auto]	
Secondary Slave	UDMA	[Auto]	
IDE HDD Block Mode		[Enabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
VIA OnChip PCI Device

VIA-3058 AC97 Audio	[Auto]	Item Help
OnChip USB Controller	[All Enabled]	Menu Level X
OnChip EHCI Controller	[Enabled]	
USB Keyboard Support	[Enabled]	
USB Mouse Support	[Disabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
Super IO Device

Onboard Serial Port 1	[3F8/IRQ4]	Item Help
Onboard Serial Port 2	[2F8/IRQ3]	Menu Level X
UART Mode Select	[Normal]	
RxD , TxD Active	[Hi,Lo]	
IR Transmission Delay	[Enabled]	
UR2 Duplex Mode	[Half]	
Use IR Pins	[IR-Rx2Tx2]	
Midi Port Address	[330]	
x Midi Port IRQ	5	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.8 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.

Phoenix – AwardBIOS CMOS Setup Utility
Power Management Setup

ACPI function	[Enabled]	Item Help
ACPI Suspend Type	[S1(POS)]	Menu Level X
Power Management Option	[User Define]	
HDD Power Down	[Disabled]	
Suspend Mode	[Disabled]	
Video Off Option	[Suspend Off]	
Video Off Method	[V/H SYNC+Blank]	
MODEM Use IRQ	[3]	
Soft-off by PWRTYN	[Instant-off]	
Run VGABIOS if S3 Resume	[Auto]	
X IRQ/Event Activity Detect	[Press Enter]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
IRQ/Event Activity Detect

PS2KB Wakeup Select	[Hot key]	Item Help
PS2KB Wakeup from S3/S4/S5	[Disabled]	Menu Level X
x Power Button Lock	Enabled	
PS2MS Wakeup from S3/S4/S5	[Disabled]	
USB Resume from S3	[Disabled]	
VGA	[OFF]	
LPT & COM	[LPT/COM]	
HDD & FDD	[ON]	
PCI Master	[OFF]	
PowerOn by PCI Card	[Disabled]	
Modem Ring Resume	[Disabled]	
RTC Alarm Resume	[Disabled]	
x Date (of Month)	0	
x Resume Time (hh:mm:ss)	0:0:0	
X IRQs Activity Monitoring	[Press Enter]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Phoenix – AwardBIOS CMOS Setup Utility
IRQs Activity Monitoring

Primary INTR		[ON]	Item Help
IRQ3	(COM 2)	[Enabled]	Menu Level X
IRQ4	(COM 1)	[Enabled]	
IRQ5	(LPT 2)	[Enabled]	
IRQ6	(Floppy Disk)	[Enabled]	
IRQ7	(LPT 1)	[Enabled]	
IRQ8	(RTC Alarm)	[Disabled]	
IRQ9	(IRQ2 Redir)	[Disabled]	
IRQ10	(Reserved)	[Disabled]	
IRQ11	(Reserved)	[Disabled]	
IRQ12	(PS/2 Mouse)	[Enabled]	
IRQ13	(Coprocessor)	[Enabled]	
IRQ14	(Hard Disk)	[Enabled]	
IRQ15	(Reserved)	[Disabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.9 PnP/PCI Configurations

This section describes the configuration of the PCI bus system. PCI, or **P**eripheral **C**omponents **I**nterconnect, is a system that allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

Phoenix – AwardBIOS CMOS Setup Utility
PnP/PCI Configurations

PNP OS Installed	[No]	Item Help
Reset Configuration Data	[Disabled]	Menu Level X
Resources Controlled By	[Auto(ESCD)	
x IRQ Resources	Press Enter	
PCI/VGA Palette Snoop	[Disabled]	
Assign IRQ For VGA	[Enabled]	
Assign IRQ For USB	[Enabled]	

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.10 Frequency/Voltage Control

Phoenix – AwardBIOS CMOS Setup Utility
Frequency/Voltage Control

VIA C3 Clock Ratio	[Default]	Item Help
Auto Detect DIMM/PCI Clk	[Enabled]	Menu Level X
Spread Specturm	[Disabled]	
CPU Host/PCI Clock	[Default]	
x		

ÇÈÆÅ: Select Item +/-/PU/PD: Value F10: Save ESC: Quit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.11 Load Fail-Safe Defaults

When you press <Enter> on this item you will get a confirmation dialog box with a message shown below. This option allows you to load/restore the BIOS default values permanently stored in the BIOS ROM. Pressing 'Y' loads the BIOS default values for the most stable, minimal-performance system operations.

Phoenix – AwardBIOS CMOS Setup Utility

X STANDARD CMOS Features	Load Fail-Safe Defaults
X Advanced BIOS Features	Load Optimized Defaults
X Advanced Chipset Features	Set Supervisor Password
X Integrated Peripherals	Set User Password
X Power Management	etup
X PnP/PCI Configura	Saving
X Frequency/Voltage	

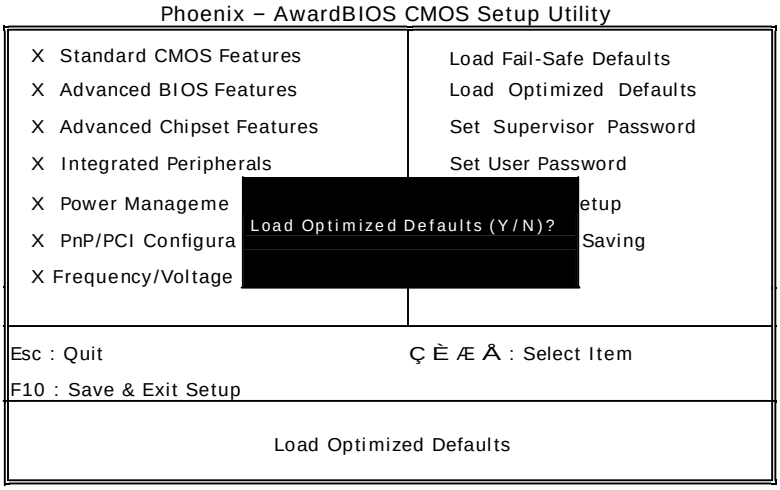
Load Fail-Safe Defaults (Y/N)? N

Esc : Quit ÇÈÆÅ : Select Item
F10 : Save & Exit Setup

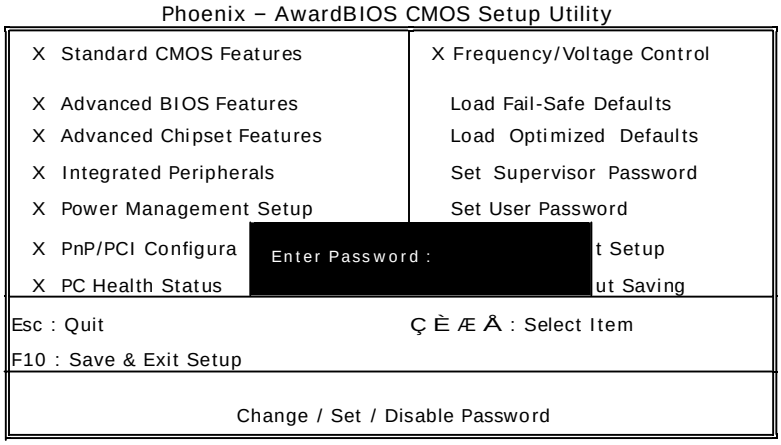
Load Fail-Safe Defaults

4.12 Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to the figure below. This option allows you to load/restore the default values to your system configuration, optimizing and enabling all high performance features. Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.



4.13 Set Supervisor/User Password



You can set either supervisor or user password, or both of them. The differences between are:

- **supervisor password:** can enter and change the options of the setup menus.
- **user password:** just can only enter but do not have the right to change the options of the setup menus.

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

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will 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 a password, just press <Enter> when you are prompted to enter the password. A message is confirmed and the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

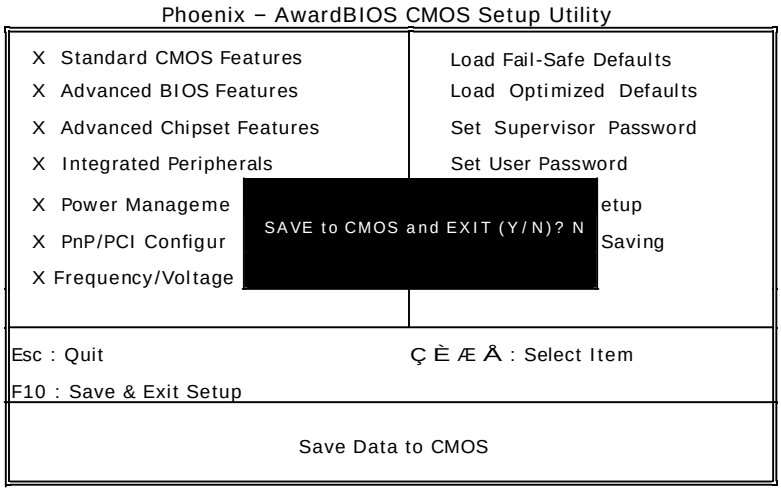
When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.
Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). If the Security option is set to “System”, the password will be required both at boot and at entry to Setup. If set to “Setup”, prompting only occurs when trying to enter Setup.

4.14 Save & Exit Setup

Press <Enter> on this item for confirmation:

Pressing “Y” stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

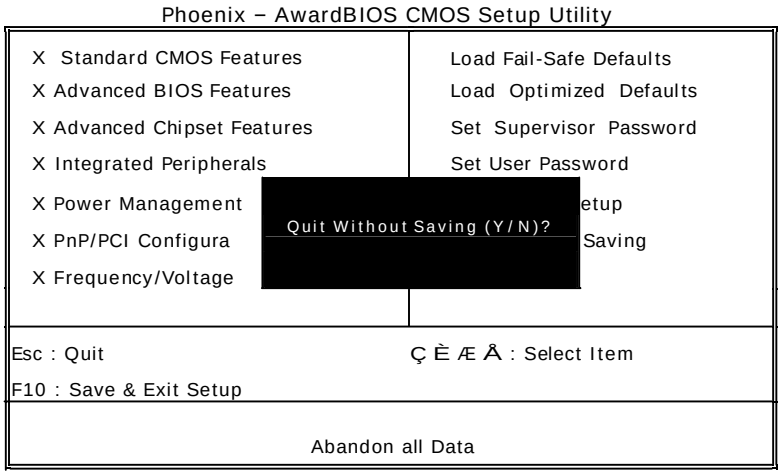


4.15 Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing any change in CMOS. The previous selections remain in effect. This exits the Setup utility and restarts your computer.



Any advice or comments about our products and service, or anything we can help you with please don't hesitate to contact with us. We will do our best to support you for your products, projects and business

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