Vortex86SX-A9100 SoC

AMI BIOS Reference Manual

(Version1.0)

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Setup for AMIBIOS

Vortex86 Family Overview

DM&P x86 Semiconductor is proud to provide the Vortex86SX RISC Microprocessor, DDR2 128MB onboard, which is based on MPU structure. It is the x86 SoC (System on Chip) with 0.13 micron process and ultra low power consumption design (less than 1 watt). This comprehensive SoC has been integrated many features, such as various I/O (RS-232, Parallel, USB and GPIO), BIOS, WatchDog Timer, Power Management, MTBF counter, LoC (LAN on Chip), JTAG etc., into a BGA packing single chip.

The Vortex86SX is a high performance, which is compatible with DOS and Linux. It integrates 32KB write through direct map L1 cache, PCI Rev. 2.1 32-bit bus interface at 33 MHz, SDRAM, DDR2, ROM controller, IPC (Internal Peripheral Controllers with DMA and interrupt timer/counter included), Fast Ethernet MAC, FIFO UART, USB2.0 Host and IDE controller into a System-on-Chip (SoC) design.

Furthermore, this outstanding Vortex86SX SoC can not only meet the requirements of embedded applications, such as Electronics Billboard, Firewall Router, Industrial Single-Board-Computers, Receipt Printer Controller, Thin Client PC, Auto Vehicle Locator, Finger Print Identification, Web Camera Thin Server, RS232-to-TCP Transmitter, but also can meet the critical temperature demand, spanning from -40 to +85 degree C.

The Vortex86SX is a high performance and fully static 32-bit X86 processor with the compatibility of Windows based, Linux and most popular 32-bit RTOS. It also integrates 32KB write through direct map L1 cache, PCI rev. 2.1 32-bit bus interface at 33 MHz, SDRAM, DDR2, ROM controller, IPC (Internal Peripheral Controllers with DMA and interrupt timer/counter included), Fast Ethernet MAC, FIFO UART, USB2.0 Host and IDE controller within a single 456-pin BGA package to form a system-on-a-chip (SOC). It provides an ideal solution for the embedded system and communications products (such as thin client, NAT router, home gateway, access point and tablet PC) to bring about desired performance.

AMI BIOS Setup

Introduction

This manual describes AMI's Setup program, which is built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the Setup information when the power is turned off.

Starting Setup

When the system is powered on, use the bios set program when you start up your system, reconfiguring your system, or press "Delete" promptly to run setup. This section will explain how to configure your system using this utility. And this change will be recognized and record them in the CMOS RAM of the SPI chip.

When you start up the computer, the system provides you the opportunity to set the program. Press the "del" during the P.O.S.T (Power-on Self-Test) to enter the program setting.   And the POST will continue with the test routines. And the firmware chip will store the setup utility on the board.   However, if you want to enter the setup after the POST, you can press Ctrl + Alt + Del simultaneously or turn off the power then back on.

The following pages are meant to give you a better insight into the options you have to setup your system. Many options depend on the choice of type of memory, memory speed, peripherals and the programs that you will be running. The effective of these settings are related to system performance that can destabilize operation. We urge you to proceed with caution.

1.1 Main menu

```
 Main    Advanced   PCIPnP    Boot    Security   Chipset    Exit
*****************************************************************************
* System Overview                               *                          *
* ******************************************** * *                          *
* AMIBIOS                                       *                          *
* Version    :08.00.14                          *                          *
* Build Date:11/22/07                           *                          *
* ID         :1ADSV000                          *                          *
*                                               *                          *
* Processor                                     *                          *
* Vortex A9100                                  *                          *
* Speed      :300MHz                            *                          *
*                                               *                          *
* System Memory                                 *                          *
* Size       :128MB                             * *   Select Screen        *
* Speed      :133MHz                            * **  Select Item          *
*                                               * +-  Change Field         *
* System Time                    [19:26:26]     * Tab Select Field         *
* System Date                 [Wed 11/28/2007]  * F1  General Help         *
*                                               * F10 Save and Exit        *
* MTBF         : 0 Hours Remaining              * ESC Exit                 *
* System Fault : 0 Times                        *                          *
*****************************************************************************
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```

1.1.1 AMIBIOS

This is the information of AMIBIOS.

1.1.2 Processor

This part shows the auto-detected CPU specification.

DM&P Semiconductor is the **Vortex86SX** 32-Bit Microprocessor, DDR2 128MB onboard, which is based on x86 structure. It is the x86 SoC (System on Chip) with 0.13 micron process and ultra low power consumption design (less than 1 watt)The CPU on the Vortex86SX is a high performance and fully static 32-bit X86 processor with the compatibility of Windows based, Linux and most popular 32-bit RTOS.

1.1.3 System Memory

This part shows the auto-detected system memory.

The **Vortex86SX** is a high performance with 128MB RAM and speed 133MHz onboard   and fully static 32-bit x86 processor, which is compatible with DOS and Linux. It integrates 32KB write through direct map L1 cache, PCI Rev. 2.1 32-bit bus interface at 33 MHz, SDRAM, DDR2, ROM controller, IPC (Internal Peripheral Controllers with DMA and interrupt timer/counter included), Fast Ethernet MAC, FIFO UART, USB2.0 Host and IDE controller into a System-on-Chip (SoC) design.

The Vortex86SX are all 128MB onboard and the speed is 133MHz.

Setup for AMIBIOS

1.1.4 System Time:

The time format is based on the 24-hour military time clock

Press the + or - key to increment the setting or type the desired value into the field.

1.1.5 System Date:

Press the + or - to set the date you wanted .

The BIOS determines the day of the week from the other date information; this field is for information only.

1.1.6 MTBF

Mean time between failures (MTBF) is the mean (average) time between failures of a system, the reciprocal of the failure rate in the special case when the failure rate is constant. Calculations of MTBF assume that a system is 'renewed', i.e. fixed, after each failure, and then returned to service immediately after failure. A related term, mean distance between failures, with a similar and more intuitive sense, is widely used in transport industries such as railways and trucking. The average time between failing and being returned to service is termed mean down time (MDT).g

1.1.7 System Fault

As the system detect the illegal command or serious error when boot, it will show on this screen.

1.2 Advanced

```
_ Main    Advanced   PCIPnP    Boot    Security   Chipset   Exit
*********************************************************************
* Advanced Settings                           * Configure Board.    *
* ***********************************          *                     *
* WARNING: Setting wrong values in below sections *                 *
*          may cause system to malfunction.   *                     *
*                                             *                     *
* * Board Configuration                       *                     *
* * IDE Configuration                         *                     *
* * Floppy Configuration                      *                     *
* * Remote Access Configuration               *                     *
* * USB Configuration                         *                     *
*                                             *                     *
* SB LAN                     [Enabled]        *                     *
* MAC Address 00 1B EB 00 0A 4D               * *    Select Screen  *
*                                             * **   Select Item    *
*                                             * Enter Go to Sub Screen *
*                                             * F1   General Help   *
*                                             * F10  Save and Exit  *
*                                             * ESC  Exit           *
*                                             *                     *
*                                             *                     *
*********************************************************************
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```

1.2.1 Board Configuration

This will show the board related information including Chip Serial Number, Model Name, PCB Version, Shipment Date and so on which is detected by Bios. And the information will help you clear to know the boards related information.

```
        Advanced
*********************************************************************
* Chip Serial Number      : 40 51 62 73 84 95    *                 *
* Model Name              : 6124                  *                 *
* PCB Version             : DM83A                 *                 *
* Shipment Date           : Year 07 Week 12       *                 *
* Customer Serial Number  : D8 E9 FA 0B 1C 2D 3E 4F *               *
*                                                 *                 *
*         PCB       0721 Vortex86SX 0732          *                 *
*         RTC OSC   0743 14.3180SC  0735          *                 *
*         DDR2      0751 ADM213     0716          *                 *
*         DC/DC PWM 0717 Tantalum   0718          *                 *
*         Transform 0719 SPI Memory 0720          *                 *
*         VGA Chip  0719 Video Mem  0720          *                 *
*         ADM485    0708                          * *   Select Screen *
*                                                 * **  Select Item  *
*         A00001         PI-00900                 * F1  General Help *
*         I-06112001     K-9605190005             * F10 Save and Exit *
*         INV-07050106   0712                     * ESC Exit         *
*         6124           6124A1.ROM               *                 *
*                                                 *                 *
*                                                 *                 *
*********************************************************************
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```

1.2.2 IDE Configuration

OnBoard PCI IDE Controller

This can select the specification you wanted for the IDE device.

This option specifies the channel used by IDE controller on the motherboard,

Option	Description
Disabled	Set this value to prevent the computer system from using the onboard IDE controller.
Primary	Set this value to allow the computer system to detect only the Primary IDE channel. This includes both the Primary Master and the Primary Slave.
Secondary	Set this value to allow the computer system to detect only the Secondary IDE channel. This includes both the Secondary Master and the Secondary Slave.
Both	Set this value to allow the computer system to detect the Primary and Secondary IDE channels. This includes both the Primary Master, Primary Slave, Secondary Master, and Secondary Slave. This is the default setting.

```
              Advanced
***************************************************************************
*  IDE Configuration                                    *        Options        *
*  ************************************************      *                       *
*  OnBoard PCI IDE Controller      [Primary]            *  Disabled             *
*                                                       *  Primary              *
*  * Primary IDE Master              : [Not Detected]   *  Secondary            *
*  * Primary IDE Slave               : [Not Detected]   *  Both                 *
*  * Secondary IDE Master            : [Not Detected]   *                       *
*  * Secondary IDE Slave      ***     Options     ***]  *                       *
*                             * Disabled          *     *                       *
*  Hard Disk Write Protect    * Primary           *     *                       *
*  IDE Detect Time Out (Sec)  * Secondary         *     *                       *
*  ATA(PI) 80Pin Cable Detecti* Both              *     *                       *
*  Hard Disk Delay            ***********************   *  *     Select Screen   *
*  OnBoard IDE Operate Mode         [Legacy Mode]      *  **    Select Item     *
*  Not Program PIO mode             [Disabled]         *  +-    Change Option    *
*                                                      *  F1    General Help     *
*                                                      *  F10   Save and Exit    *
*                                                      *  ESC   Exit             *
*                                                      *                         *
*                                                      *                         *
***************************************************************************
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```

1.2.3 Primary and Secondary IDE Master/Slave

When you entered the IDE devices, the bios will auto-detected and show the detail information of IDE devices.

If you want to change with the IDE configuration, select the item and press the "Enter" to configure the item you wanted.

Setup for AMIBIOS

Type [Auto]

Select the type of IDE drive. Setting to Auto allows automatic selection of the appropriate IDE device type. Select CDROM if you are specifically configuring a CD-ROM drive. Select ARMD (ATAPI Removable Media Device) if your device is either a ZIP, LS-120, or MO drive.

Configuration options: [Not Installed] [Auto] [CDROM] [ARMD]

Option	Description
Not Installed	Set this value to prevent the BIOS from searching for an IDE disk drive on the specified channel.
Auto	Set this value to allow the BIOS auto detect the IDE disk drive type attached to the specified channel. This setting should be used if an IDE hard disk drive is attached to the specified channel. This is the default setting.
CDROM	This option specifies that an IDE CD-ROM drive is attached to the specified IDE channel. The BIOS will not attempt to search for other types of IDE disk drives on the specified channel.
ARMD	This option specifies an ATAPI Removable Media Device. This includes, but is not limited to: • ZIP • LS-120

LBA/Large Mode [Auto]

```
        Advanced
****************************************************************
* Primary IDE Master                              *    Options     *
* ****************************************************** *             *
* Device    :Not Detected                         * Disabled        *
* ****************************************************** * Auto           *
* Type                        [Auto]              *             *
* LBA/Large Mode              [Auto]              *             *
* Block (Multi-Sector Transfer) [Auto]            *             *
* PIO Mode                    [Auto]              *             *
* DMA Mode              *** Options ***          *             *
* S.M.A.R.T.            * Disabled         *      *             *
* 32Bit Data Transfer   * Auto             *      *             *
*                       ********************      *             *
*                                                 *  *   Select Screen  *
*                                                 *  **  Select Item    *
*                                                 *  +-  Change Option   *
*                                                 *  F1  General Help    *
*                                                 *  F10 Save and Exit   *
*                                                 *  ESC Exit            *
*                                                 *             *
*                                                 *             *
****************************************************************
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```

Enables or disables the LBA (Logical Block Addressing)/Large mode.

Auto enables the LBA mode if the device supports this mode, and if the device was not previously formatted with LBA mode disabled.

Configuration options: [Disabled] [Auto]

Option	Description
Disabled	Set this value to prevent the BIOS from using Large Block Addressing mode control on the specified channel.
Auto	Set this value to allow the BIOS to auto detect the Large Block Addressing mode control on the specified channel. This is the default setting.

Block (Multi-sector Transfer) [Auto]

```
        Advanced
****************************************************************
* Primary IDE Master                              *    Options     *
* ****************************************************** *             *
* Device    :Not Detected                         * Disabled        *
* ****************************************************** * Auto           *
* Type                        [Auto]              *             *
* LBA/Large Mode              [Auto]              *             *
* Block (Multi-Sector Transfer) [Auto]            *             *
* PIO Mode                    [Auto]              *             *
* DMA Mode              *** Options ***          *             *
* S.M.A.R.T.            * Disabled         *      *             *
* 32Bit Data Transfer   * Auto             *      *             *
*                       ********************      *             *
*                                                 *  *   Select Screen  *
*                                                 *  **  Select Item    *
*                                                 *  +-  Change Option   *
*                                                 *  F1  General Help    *
*                                                 *  F10 Save and Exit   *
*                                                 *  ESC Exit            *
*                                                 *             *
*                                                 *             *
****************************************************************
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```

Enables or disables data multi-sectors transfers. When set to Auto, the data transfer from and to the device occurs multiple sectors at a time if the device supports multi-sector transfer

Setup for AMIBIOS

feature. When set to Disabled, the data transfer from and to the device occurs one sector at a time.

Configuration options: [Disabled] [Auto]

Option	Description
Disabled	Set this value to prevent the BIOS from using Multi-Sector Transfer on the specified channel. The data to and from the device will occur one sector at a time.
Auto	Set this value to allow the BIOS to auto detect device support for Multi-Sector Transfers on the specified channel. If supported, Set this value to allow the BIOS to auto detect the number of sectors per block for transfer from the hard disk drive to the memory. The data transfer to and from the device will occur multiple sectors at a time. This is the default setting.

PIO Mode [Auto]

IDE Programmed I/O (PIO) Mode programs the timing cycle between IDE drive and the programmable IDE controller. As PIO mode increases, the cycle time decreases. Select [Auto] to let AMIBIOS select the PIO mode. If you select a specific value for the PIO mode, you must be absolutely sure that the value you are selecting is supported by the IDE being configured.

Configuration options: [Auto] [0] [1] [2] [3] [4]

Option	Description
Auto	Set this value to allow the BIOS to auto detect the PIO mode. Use this value if the IDE disk drive support cannot be determined. This is the default setting.
0	Set this value to allow the BIOS to use PIO mode 0. It has a data transfer rate of 3.3 MBs.
1	Set this value to allow the BIOS to use PIO mode 1. It has a data transfer rate of 5.2 MBs.
2	Set this value to allow the BIOS to use PIO mode 2. It has a data transfer rate of 8.3 MBs.
3	Set this value to allow the BIOS to use PIO mode 3. It has a data transfer rate of 11.1 MBs.
4	Set this value to allow the BIOS to use PIO mode 4. It has a data transfer rate of 16.6 MBs. This setting generally works with all hard disk drives manufactured after 1999. For other disk drive, such as IDE CD-ROM drives, check the specifications of the drive.

DMA Mode [Auto]

```
              Advanced
*****************************************************************
* Primary IDE Master                              *      Options        *
* ***************************************************** *                     *
* Device      :Not Detected                       * Auto                *
* ***************************************************** *                     *
* Type                          [Auto]            *                     *
* LBA/Large Mode                 [Auto]            *                     *
* Block (Multi-Sector Transfer)  [Auto]            *                     *
* PIO Mode                       [Auto]            *                     *
* DMA Mode                       [Auto]            *                     *
* S.M.A.R.T.                     [Auto]            *                     *
* 32Bit Data Transfer           [Enabled]         *                     *
*                                                 *                     *
*                                                 * *    Select Screen  *
*                                                 * **   Select Item    *
*                                                 * +-   Change Option   *
*                                                 * F1   General Help    *
*                                                 * F10  Save and Exit   *
*                                                 * ESC  Exit            *
*                                                 *                     *
*                                                 *                     *
*                                                 *                     *
*****************************************************************
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```

This setting allows you to adjust the DMA mode options. The Optimal and Fail-Safe

default setting is Auto.

SMART [Auto]

```
_             Advanced
*****************************************************************
* Primary IDE Master                              *      Options        *
* ***************************************************** *                     *
* Device      :Not Detected                       * Auto                *
* ***************************************************** * Disabled            *
* Type                          [Auto]            * Enabled             *
* LBA/Large Mode                 [Auto]            *                     *
* Block (Multi-Sector Transfer)  [Auto]            *                     *
* PIO Mode                   *** Options ***       *                     *
* DMA Mode                   * Auto          *     *                     *
* S.M.A.R.T.                 * Disabled      *  *  *                     *
* 32Bit Data Transfer        * Enabled       *     *                     *
*                            *****************     *                     *
*                                                 * *    Select Screen  *
*                                                 * **   Select Item    *
*                                                 * +-   Change Option   *
*                                                 * F1   General Help    *
*                                                 * F10  Save and Exit   *
*                                                 * ESC  Exit            *
*                                                 *                     *
*                                                 *                     *
*****************************************************************
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```

S.M.A.R.T. stands for Smart Monitoring, Analysis, and Reporting Technology. It allows

AMIBIOS to use the SMART protocol to report server system information over a network.

Configuration options: [Auto] [Disabled] [Enabled]

Option	Description
Auto	Set this value to allow the BIOS to auto detect hard disk drive support. Use this setting if the IDE disk drive support cannot be determined. This is the default setting.
Disabled	Set this value to prevent the BIOS from using the SMART feature.
Enabled	Set this value to allow the BIOS to use the SMART feature on support hard disk drives.

32Bit Data Transfer [Disabled]

```
_          Advanced
***********************************************************************
* Primary IDE Master                          *          Options       *
* *********************************************** *                      *
* Device     :Not Detected                    * Disabled               *
* *********************************************** * Enabled              *
* Type                        [Auto]          *                        *
* LBA/Large Mode              [Auto]          *                        *
* Block (Multi-Sector Transfer) [Auto]        *                        *
* PIO Mode                    [Auto]          *                        *
* DMA Mode            *** Options ***         *                        *
* S.M.A.R.T.          * Disabled        *     *                        *
* 32Bit Data Transfer * Enabled         *     *                        *
*                     ********************     *                        *
*                                             *  *   Select Screen      *
*                                             *  **  Select Item        *
*                                             *  +-  Change Option       *
*                                             *  F1  General Help        *
*                                             *  F10 Save and Exit       *
*                                             *  ESC Exit                *
*                                             *                         *
*                                             *                         *
***********************************************************************
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```

Enables or disables 32-bit data transfer. If the host controller does not support 32-bit data transfer, this menu must be set to [Disabled] Configuration options:[Disabled] [Enabled]

Option	Description
Disabled	Set this value to prevent the BIOS from using 32-bit data transfers.
Enabled	Set this value to allow the BIOS to use 32-bit data transfers on support hard disk drives. This is the default setting.

Hard Disk Write Protect

This will allow you to enable or disable the hard disk write protection and this will only effective if you configure your device through BIOS.

Option	Description
Disabled	Set this value to allow the hard disk drive to be used normally. Read, write, and erase functions can be performed to the hard disk drive. This is the default setting.
Enabled	Set this value to prevent the hard disk drive from being erased.

```
       Advanced
*******************************************************************************
* IDE Configuration                               *       Options             *
* ****************************************         *                           *
* OnBoard PCI IDE Controller      [Primary]       * Disabled                  *
*                                                 * Enabled                   *
* * Primary IDE Master           : [Not Detected] *                           *
* * Primary IDE Slave            : [Not Detected] *                           *
* * Secondary IDE Master         : [Not Detected] *                           *
* * Secondary IDE Slave          : [Not Detected] *                           *
*                         *** Options ***         *                           *
* Hard Disk Write Protect  * Disabled         * ▌ *                           *
* IDE Detect Time Out (Sec) * Enabled         *   *                           *
* ATA(PI) 80Pin Cable Detecti*********************  *                         *
* Hard Disk Delay              [2 Second]         * *    Select Screen        *
* OnBoard IDE Operate Mode     [Legacy Mode]      * **   Select Item          *
* Not Program PIO mode         [Disabled]         * +-   Change Option        *
*                                                 * F1   General Help         *
*                                                 * F10  Save and Exit        *
*                                                 * ESC  Exit                 *
*                                                 *                           *
*                                                 *                           *
*                                                 *                           *
*******************************************************************************
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```

IDE Detect Time Out (Sec)

Select the time out value for detecting IDE devices.

Configuration options: [0] [5] [10] [15] [20] [25] [30] [35]

Option	Description
0	This value is the best setting to use if the onboard IDE controllers are set to a specific IDE disk drive in the AMIBIOS.
5	Set this value to stop the AMIBIOS from searching the IDE bus for IDE disk drives in five seconds. A large majority of ultra ATA hard disk drives can be detected well within five seconds.
10	Set this value to stop the AMIBIOS from searching the IDE bus for IDE disk drives in 10 seconds.
15	Set this value to stop the AMIBIOS from searching the IDE bus for IDE disk drives in 15 seconds.
20	Set this value to stop the AMIBIOS from searching the IDE bus for IDE disk drives in 20 seconds.
25	Set this value to stop the AMIBIOS from searching the IDE bus for IDE disk drives in 25 seconds.
30	Set this value to stop the AMIBIOS from searching the IDE bus for IDE disk drives in 30 seconds.
35	*35* is the default value. It is the recommended setting when all IDE connectors are set to *AUTO* in the AMIBIOS setting.

```
       Advanced
*******************************************************************************
* IDE Configuration                               *       Options             *
* ****************************************         *                           *
* OnBoard PCI IDE Controller      [Primary]       * 0                         *
*                                                 * 5                         *
* * Primary IDE Master           : [Not Detected] * 10                        *
* * Primary IDE Slave       *** Options ***]      * 15                        *
* * Secondary IDE Master    * 0              *]   * 20                        *
* * Secondary IDE Slave     * 5              *]   * 25                        *
*                           * 10             *    * 30                        *
* Hard Disk Write Protect   * 15             *    * 35                        *
* IDE Detect Time Out (Sec) * 20             * ▌  *                           *
* ATA(PI) 80Pin Cable Detecti* 25            *    *                           *
* Hard Disk Delay           * 30             *    *    Select Screen          *
* OnBoard IDE Operate Mode  * 35             *    * **  Select Item           *
* Not Program PIO mode      *******************   * +-  Change Option         *
*                                                 * F1  General Help          *
*                                                 * F10 Save and Exit         *
*                                                 * ESC Exit                  *
*                                                 *                           *
*                                                 *                           *
*                                                 *                           *
*******************************************************************************
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```

ATA (PI) 80 pin Cable Detection

Set this option to select the method used to detect the ATA (PI) 80 pin cable. The

Optimal and Fail-Safe setting is Host & Device.

Option	Description
Host & Device	Set this value to use both the motherboard onboard IDE controller and IDE disk drive to detect the type of IDE cable used. This is the default setting.
Host	Set this value to use motherboard onboard IDE controller to detect the type of IDE cable used.
Device	Set this value to use IDE disk drive to detect the type of IDE cable used.

```
_          Advanced
***************************************************************************
* IDE Configuration                                   *        Options        *
* *************************************************** *                        *
* OnBoard PCI IDE Controller     [Primary]           * Host & Device          *
*                                                    * Host                   *
* * Primary IDE Master           : [Not Detected]    * Device                 *
* * Primary IDE Slave            : [Not Detected]    *                        *
* * Secondary IDE Master         : [Not Detected]    *                        *
* * Secondary IDE Slave     ***    Options    ***]   *                        *
*                          * Host & Device      *    *                        *
* Hard Disk Write Protect  * Host               *    *                        *
* IDE Detect Time Out (Sec)* Device             *    *                        *
* ATA(PI) 80Pin Cable Detecti**********************  *                        *
* Hard Disk Delay               [2 Second]           * *     Select Screen    *
* OnBoard IDE Operate Mode      [Legacy Mode]        * **    Select Item      *
* Not Program PIO mode          [Disabled]           * +-    Change Option    *
*                                                    * F1    General Help     *
*                                                    * F10   Save and Exit    *
*                                                    * ESC   Exit             *
*                                                    *                        *
*                                                    *                        *
***************************************************************************
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```

The use of an 80-conductor ATA cable is mandatory for running Ultra ATA/66, Ultra

ATA/100 and Ultra ATA/133 IDE hard disk drives. The standard 40-conductor ATA cable

cannot handle the higher speeds.

80-conductor ATA cable is plug compatible with the standard 40-conductor ATA cable.

Because of this, the system must determine the presence of the correct cable. This detection

is achieved by having a break in one of the lines on the 80-conductor ATA cable that is

normally an unbroken connection in the standard 40-conductor ATA cable. It is this break that

is used to make this determination. The AMIBIOS can instruct the drive

to run at the correct speed for the cable type detected.

Hard Disk Delay

Delay for a connected HDD (Secs). The length of time in seconds the

BIOS will wait for a hard disk to be ready for operation. If the hard drive

is not ready, the BIOS might not detect the hard drive correctly. The range is from 0~8

seconds.

**We suggest the delay time select 2 sec.delay.

```
         Advanced
*******************************************************************************
* IDE Configuration                                    *        Options       *
* **************************************************** *                       *
* OnBoard PCI IDE Controller      [Primary]            * Disabled             *
*                                                      * 1 Second             *
* * Primary IDE Master            : [Not Detected]     * 2 Second             *
* * Primary IDE Slave             : [Not Detected]     * 4 Second             *
* * Secondary IDE Master     *** Options    ***]       * 8 Second             *
* * Secondary IDE Slave      * Disabled        *]      *                      *
*                            * 1 Second         *      *                      *
* Hard Disk Write Protect    * 2 Second         *      *                      *
* IDE Detect Time Out (Sec)  * 4 Second         *      *                      *
* ATA(PI) 80Pin Cable Detecti* 8 Second         *      *                      *
* Hard Disk Delay            ********************* * *     Select Screen       *
* OnBoard IDE Operate Mode        [Legacy Mode]       * **    Select Item      *
* Not Program PIO mode            [Disabled]          * +-    Change Option    *
*                                                     * F1    General Help     *
*                                                     * F10   Save and Exit    *
*                                                     * ESC   Exit             *
*                                                     *                        *
*                                                     *                        *
*                                                     *                        *
*******************************************************************************
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```

OnBoard IDE Operate Mode

The items in this menu allow you to set or change the configurations for the IDE devices

installed in the system. Select an item then press <Enter> if you want to configure the item.

```
         Advanced
*******************************************************************************
* IDE Configuration                                    *        Options       *
* **************************************************** *                       *
* OnBoard PCI IDE Controller      [Primary]            * Legacy Mode          *
*                                                      * Native Mode          *
* * Primary IDE Master            : [Not Detected]     *                      *
* * Primary IDE Slave             : [Not Detected]     *                      *
* * Secondary IDE Master          : [Not Detected]     *                      *
* * Secondary IDE Slave           : [Not Detected]     *                      *
*                            *** Options    ***        *                      *
* Hard Disk Write Protect    * Legacy Mode      *      *                      *
* IDE Detect Time Out (Sec)  * Native Mode      *      *                      *
* ATA(PI) 80Pin Cable Detecti********************      *                      *
* Hard Disk Delay                 [2 Second]          * *     Select Screen   *
* OnBoard IDE Operate Mode        [Legacy Mode]       * **    Select Item     *
* Not Program PIO mode            [Disabled]          * +-    Change Option    *
*                                                     * F1    General Help     *
*                                                     * F10   Save and Exit    *
*                                                     * ESC   Exit             *
*                                                     *                        *
*                                                     *                        *
*                                                     *                        *
*******************************************************************************
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```

Setup for AMIBIOS

Not Program PIO mode

If the bios cannot detect the CF or IDE, this will allow you to indicate the CF or IDE card to

Primary Channel or Secondary Channel.

```
           Advanced
*********************************************************************************
* IDE Configuration                              *        Options        *
* ********************************************** *                       *
* OnBoard PCI IDE Controller    [Primary]        * Disabled              *
*                                                * Primary Channel       *
* * Primary IDE Master        : [Not Detected]   * Secondary Channel     *
* * Primary IDE Slave         : [Not Detected]   *                       *
* * Secondary IDE Master      : [Not Detected]   *                       *
* * Secondary IDE Slave     ***    Options    ***]                       *
*                          * Disabled          *  *                      *
* Hard Disk Write Protect  * Primary Channel   *  *                      *
* IDE Detect Time Out (Sec)* Secondary Channel *  *                      *
* ATA(PI) 80Pin Cable Detecti***********************                      *
* Hard Disk Delay               [2 Second]       * *    Select Screen    *
* OnBoard IDE Operate Mode      [Legacy Mode]    * **   Select Item      *
* Not Program PIO mode          [Disabled]       * +-   Change Option     *
*                                                * F1   General Help      *
*                                                * F10  Save and Exit     *
*                                                * ESC  Exit              *
*                                                *                        *
*                                                *                        *
*********************************************************************************
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```

1.3.3 Floppy Configuration

```
           Advanced
*********************************************************************************
* Floppy Configuration                           *        Options        *
* ********************************************** *                       *
* Floppy A                      [Disabled]       * Disabled              *
* Floppy B                      [Disabled]       * 360 KB 5*"            *
*                                                * 1.2 MB 5*"            *
*                                                * 720 KB 3*"            *
*                          ***    Options    *** * 1.44 MB 3*"          *
*                          * Disabled          * * 2.88 MB 3*"          *
*                          * 360 KB 5*"        *  *                      *
*                          * 1.2 MB 5*"        *  *                      *
*                          * 720 KB 3*"        *  *                      *
*                          * 1.44 MB 3*"       *  *                      *
*                          * 2.88 MB 3*"       *  * *    Select Screen   *
*                          ********************** * **   Select Item      *
*                                                * +-   Change Option     *
*                                                * F1   General Help      *
*                                                * F10  Save and Exit     *
*                                                * ESC  Exit              *
*                                                *                        *
*                                                *                        *
*********************************************************************************
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```

Floppy A' B

Select the correct specifications for the diskette drive(s) installed in the computer.

Disabled: No diskette drive installed

360KB 5 1/4: 5.25 in5-1/4 inch PC-type standard drive

1.2MB 5 1/4: 5.25 in5-1/4 inch AT-type high-density drive

720KB 3 1/2: 3.5 in3-1/2 inch double-sided drive

Setup for AMIBIOS

1.44MB 3 1/2: 3.5 in3-1/2 inch double-sided drive

2.88MB 3 1/2: 3.5 in 3-1/2 inch double-sided drive

1.2.4 SuperIO Configuration

You can use this screen to select options for the Super I/O settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.

Onboard Floppy Controller

This item specifies the Floppy used by the onboard Floppy controller. The settings are *Disabled or Enabled* .

Floppy Drive Swap

This option allows you to *Enabled* or *Disabled* the Floppy Drive Swap.

Serials Port Address

This option specifies the base I/O port address and Interrupt Request address of serial port.

Parallel Port Mode

This option specifies the parallel port mode. The Optimal setting is *Normal*. The Fail-Safe setting is *Disabled.*

Option	Description
Disabled	Set this value to prevent the parallel port from accessing any system resources. When the value of this option is set to *Disabled*, the printer port becomes unavailable.
378	Set this value to allow the parallel port to use 378 as its I/O port address. This is the default setting. The majority of parallel ports on computer systems use IRQ7 and I/O Port 378H as the standard setting.
278	Set this value to allow the parallel port to use 278 as its I/O port address.
3BC	Set this value to allow the parallel port to use 3BC as its I/O port address.

Parallel Port Mode

This option specifies the parallel port mode. The Optimal setting is *Normal*. The Fail-Safe setting is *Disabled*.

Option	Description
Normal	Set this value to allow the standard parallel port mode to be used. This is the default setting.
Bi-Directional	Set this value to allow data to be sent to and received from the parallel port.
EPP	The parallel port can be used with devices that adhere to the Enhanced Parallel Port (EPP) specification. EPP uses the existing parallel port signals to provide asymmetric bi-directional data transfer driven by the host device.
ECP	The parallel port can be used with devices that adhere to the Extended Capabilities Port (ECP) specification. ECP uses the DMA protocol to achieve data transfer rates up to 2.5 Megabits per second. ECP provides symmetric bi-directional communication.

Parallel Port IRQ

This option specifies the IRQ used by the parallel port. The Optimal and Fail-Safe default

setting is *7*.

Option	Description
5	Set this value to allow the serial port to use Interrupt 3.
7	Set this value to allow the serial port to use Interrupt 7. This is the default setting. The majority of parallel ports on computer systems use IRQ7 and I/O Port 378H as the standard setting.

OnBoard Game Port

This allow you Enable/Disabled the Game Port

OnBoard MIDI Port

This option specifies the onboard Midi port I/O address. The Optimal setting is

300/330. The Fail-Safe setting is *Disabled*.

OnBoard Smart Card Reader

This option specified the Smart Card Reader address.

Smart Card IRQ Select

This option specifies the IRQ used by the Smart Card

1.2.5 Remote Access Configuration

Remote Access

This menu allows you to enable or disable Remote Access.

Configuration options: [Disabled] [Enabled].

If you select it to "Enable", below sub menus will show up:

Option	Description
Disabled	Set this value to prevent the BIOS from using Remote Access.
Serial	Set the value for this option to *Serial* to allow the system to use the remote access feature. The remote access feature requires a dedicated serial port connection.

Serial port number

```
       Advanced
*****************************************************************************
* Configure Remote Access type and parameters      *      Options          *
* *************************************************** *                      *
* Remote Access              [Enabled]     * COM1                           *
*                                          * COM2                           *
* Serial port number         [COM1]        * COM3                           *
*     Base Address, IRQ      [3F8h, 4]     * COM4                           *
* Serial Port Mode           [115200 8,n,1] *                               *
* Flow Control             *** Options ***   *                             *
* Redirection After BIOS POST* COM1       *  *                             *
* Terminal Type            * COM2         *  *                             *
* VT-UTF8 Combo Key Support * COM3        *  *                             *
* Sredir Memory Display Delay* COM4       *  *                             *
*                          ***************** * *  Select Screen            *
*                                          * **   Select Item             *
*                                          * +-   Change Option           *
*                                          * F1   General Help            *
*                                          * F10  Save and Exit           *
*                                          * ESC  Exit                    *
*                                          *                              *
*                                          *                              *
*****************************************************************************
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```

This menu allows you to select the serial port for console redirection. Make sure the selected port is enabled.

Configuration options: [COM1] [COM2] [COM3] [COM4]

Option	Description
COM1	Set this value to allow the system to use COM1 (Communication port1) for the remote access interface.
COM2	Set this value to allow the system to use COM2 (Communication port2) for the remote access interface.

Serial Port Mode

```
        Advanced
****************************************************************************
* Configure Remote Access type and parameters    *        Options         *
* ***********************************************  *                         *
* Remote Access              [Enabled]            * 115200 8,n,1            *
*                                                 * 57600 8,n,1             *
* Serial port number         [COM1]               * 38400 8,n,1             *
*    Base Address, IRQ       [3F8h, 4]            * 19200 8,n,1             *
* Serial Port Mode       ***   Options   ***      * 09600 8,n,1             *
* Flow Control           * 115200 8,n,1      *    *                         *
* Redirection After BIOS POST* 57600 8,n,1   *    *                         *
* Terminal Type          * 38400 8,n,1       *    *                         *
* VT-UTF8 Combo Key Support * 19200 8,n,1    *    *                         *
* Sredir Memory Display Delay* 09600 8,n,1   *    *                         *
*                        *********************    * *    Select Screen      *
*                                                 * **   Select Item        *
*                                                 * +-   Change Option      *
*                                                 * F1   General Help       *
*                                                 * F10  Save and Exit      *
*                                                 * ESC  Exit                *
*                                                 *                         *
*                                                 *                         *
****************************************************************************
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```

Select the baud rate you want the serial port to use for console redirection.

Configuration settings: [115200 8,n,1] [57600 8,n,1] [38400 8,n,1] [19200 8,n,1] [09600 8,n,1]

Option	Description
115200 8,n,1	Set this value to allow you to select 115200 as the baud rate (transmitted bits per second) of the serial port.
57600 8,n,1	Set this value to allow you to select 57600 as the baud rate (transmitted bits per second) of the serial port.
19200 8,n,1	Set this value to allow you to select 19200 as the baud rate (transmitted bits per second) of the serial port.

Flow Control [None]

```
_       Advanced
****************************************************************************
* Configure Remote Access type and parameters    *        Options         *
* ***********************************************  *                         *
* Remote Access              [Enabled]            * None                    *
*                                                 * Hardware                *
* Serial port number         [COM1]               * Software                *
*    Base Address, IRQ       [3F8h, 4]            *                         *
* Serial Port Mode           [115200 8,n,1]       *                         *
* Flow Control           ***   Options   ***      *                         *
* Redirection After BIOS POST* None           *    *                         *
* Terminal Type          * Hardware          *    *                         *
* VT-UTF8 Combo Key Support * Software        *    *                         *
* Sredir Memory Display Delay*******************   *                         *
*                                                 * *    Select Screen      *
*                                                 * **   Select Item        *
*                                                 * +-   Change Option      *
*                                                 * F1   General Help       *
*                                                 * F10  Save and Exit      *
*                                                 * ESC  Exit                *
*                                                 *                         *
*                                                 *                         *
****************************************************************************
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```

This menu allows you to select flow control for console redirection

Configuration options: [None] [Hardware] [Software]

Redirection After BIOS POST

```
       Advanced
***********************************************************************
* Configure Remote Access type and parameters       *        Options       *
* ***********************************************    *                       *
* Remote Access              [Enabled]               * Disabled             *
*                                                    * Boot Loader          *
* Serial port number         [COM1]                  * Always               *
*     Base Address, IRQ      [3F8h, 4]               *                       *
* Serial Port Mode           [115200 8,n,1]          *                       *
* Flow Control         *** Options     ***           *                       *
* Redirection After BIOS POST* Disabled          *█  *                       *
* Terminal Type         * Boot Loader         *      *                       *
* VT-UTF8 Combo Key Support * Always           *     *                       *
* Sredir Memory Display Delay***********************  *                       *
*                                                    * *    Select Screen    *
*                                                    * **   Select Item      *
*                                                    * +-   Change Option     *
*                                                    * F1   General Help     *
*                                                    * F10  Save and Exit    *
*                                                    * ESC  Exit             *
*                                                    *                       *
*                                                    *                       *
***********************************************************************
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```

This menu allows you to set Redirection configuration after BIOS POST. You may turn off the redirection after POST [Disable] or set the Redirection to be active during POST and Boot Loader [Boot Loader] or to set the Redirection to be always active [Always]

Terminal Type [ANSI]

```
       Advanced
***********************************************************************
* Configure Remote Access type and parameters       *        Options       *
* ***********************************************    *                       *
* Remote Access              [Enabled]               * ANSI                 *
*                                                    * VT100                *
* Serial port number         [COM1]                  * VT-UTF8              *
*     Base Address, IRQ      [3F8h, 4]               *                       *
* Serial Port Mode           [115200 8,n,1]          *                       *
* Flow Control         *** Options     ***           *                       *
* Redirection After BIOS POST* ANSI               *  *                       *
* Terminal Type         * VT100              *       *                       *
* VT-UTF8 Combo Key Support * VT-UTF8          *█    *                       *
* Sredir Memory Display Delay***********************  *                       *
*                                                    * *    Select Screen    *
*                                                    * **   Select Item      *
*                                                    * +-   Change Option     *
*                                                    * F1   General Help     *
*                                                    * F10  Save and Exit    *
*                                                    * ESC  Exit             *
*                                                    *                       *
*                                                    *                       *
***********************************************************************
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```

This menu allows you to select the target terminal type.

Configuration options: [ANSI] [VT100] [VT-UTF8]

VT-UTF8 Combo Key Support [Disabled]

Setup for AMIBIOS

```
_        Advanced
****************************************************************************
*  Configure Remote Access type and parameters         *       Options        *
*  *************************************************** *                        *
*  Remote Access                 [Enabled]        * Disabled                *
*                                                 * Enabled                 *
*  Serial port number            [COM1]           *                         *
*       Base Address, IRQ        [3F8h, 4]         *                         *
*  Serial Port Mode              [115200 8,n,1]    *                         *
*  Flow Control                  [None]            *                         *
*  Redirection After BIOS POST*** Options    *** *                         *
*  Terminal Type                * Disabled      * *                         *
*  VT-UTF8 Combo Key Support   * Enabled       * *  *                        *
*  Sredir Memory Display Delay******************* *                         *
*                                                 *                         *
*                                                 * *    Select Screen      *
*                                                 * **    Select Item       *
*                                                 * +-    Change Option      *
*                                                 * F1    General Help       *
*                                                 * F10   Save and Exit      *
*                                                 * ESC   Exit               *
*                                                 *                         *
*                                                 *                         *
****************************************************************************
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```

This menu allows you to enable or disable VT-UTF8 combination key support for ANSI/VT100 terminals.

Configuration options: [Disabled] [Enabled]

Sredir Memory Display Delay.

This allow you to indicate the length of time in second to of the Memory Display Delay

```
_        Advanced
****************************************************************************
*  Configure Remote Access type and parameters         *       Options        *
*  *************************************************** *                        *
*  Remote Access                 [Enabled]        * No Delay                *
*                                                 * Delay 1 Sec             *
*  Serial port number            [COM1]           * Delay 2 Sec             *
*       Base Address, IRQ        [3F8h, 4]         * Delay 4 Sec             *
*  Serial Port Mode              [115200 8,n,1]    *                         *
*  Flow Control               ***    Options    *** *                         *
*  Redirection After BIOS POST* No Delay       * *                         *
*  Terminal Type              * Delay 1 Sec    * *                         *
*  VT-UTF8 Combo Key Support  * Delay 2 Sec    * *                         *
*  Sredir Memory Display Delay* Delay 4 Sec    * *  *                        *
*                             ***************** *                         *
*                                                 * *    Select Screen      *
*                                                 * **    Select Item       *
*                                                 * +-    Change Option      *
*                                                 * F1    General Help       *
*                                                 * F10   Save and Exit      *
*                                                 * ESC   Exit               *
*                                                 *                         *
*                                                 *                         *
****************************************************************************
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```

1.3.6 USB Configuration

USB Functions

Set this value to allow the system to enable or disable the onboard USB ports. The Optimal and Fail-Safe default setting is Enabled.

Option	Description
Disabled	This setting makes the onboard USB ports unavailable.
Enabled	This setting allows the use of the USB ports. This is the default setting.

```
_         Advanced
***********************************************************************************
* USB Configuration                                          *        Options        *
* **************************************************** *                               *
* Module Version - 2.24.2-13.4                               * Enabled                *
*                                                            * Disabled               *
* USB Devices Enabled :                                      *                        *
*   1 Drive                                                  *                        *
*                                                            *                        *
* USB Port 0,1                      [Enabled]                *                        *
* USB Port 2,3                      [Enabled]                *                        *
* Legacy USB Support                [Enabled]                *                        *
* USB 2.0 Controller Mode           [HiSpeed]                *                        *
* BIOS EHCI Hand-Off                [Enabled]                *                        *
*                                                            * *    Select Screen     *
* * USB Mass Storage Device Configuration                    * **    Select Item      *
*                                                            * +-    Change Option     *
*                                                            * F1    General Help      *
*                                                            * F10   Save and Exit     *
*                                                            * ESC   Exit              *
*                                                            *                        *
*                                                            *                        *
***********************************************************************************
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```

Legacy USB Support

Legacy USB Support refers to the USB mouse and USB keyboard support. Normally if this option is not enabled, any attached USB mouse or USB keyboard will not become available until a USB compatible operating system is fully booted with all USB drivers loaded. When this option is enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB drivers loaded on the system. Set this value to enable or disable the Legacy USB Support. The Optimal and Fail-Safe default setting is *Disabled*.

Option	Description
Disabled	Set this value to prevent the use of any USB device in DOS or during system boot. This is the default setting.
Enabled	Set this value to allow the use of USB devices during boot and while using DOS.
Auto	This option auto detects USB Keyboards or Mice and if found, allows them to be utilized during boot and while using DOS.

USB 2.0 Controller Mode

Allow you configure the USB 2.0 controller in HiSpeed or Full Speed.

BIOS EHCI Hand-Off

Allow you to enable or disable support for the operating system without an EHCI hand-off feature.

1.2.7 SB LAN

Allow you to enable or disable internal LAN

1.3 PCIPnP

```
 Main   Advanced  PCIPnP   Boot   Security  Chipset   Exit
*******************************************************************
* Advanced PCI/PnP Settings                  **        Options    *
* *****************************************    **                  *
* WARNING: Setting wrong values in below sections  ** No          *
*          may cause system to malfunction.   ** Yes              *
*                                             **                  *
* Clear NVRAM                     [No]        **                  *
* Plug & Play O/S                 [No]        **                  *
* PCI Latency Timer               [64]        **                  *
* Allocate IRQ to PCI VGA         [No]        **                  *
* Palette Snooping                [Disabled]  **                  *
* PCI IDE BusMaster               [Disabled]  **                  *
* OffBoard PCI/ISA IDE Card       [Auto]      **                  *
*                                             **  *  Select Screen *
* IRQ3                            [Reserved]  ** **  Select Item   *
* IRQ4                            [Reserved]  ** +-  Change Option *
* IRQ5                            [Available] ** F1  General Help  *
* IRQ6                            [Available] ** F10 Save and Exit *
* IRQ7                            [Available] ** ESC Exit          *
* IRQ9                            [Available] **                   *
* IRQ10                           [Available] **                  *
*******************************************************************
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```

1.3.1 Clear NVRAM

Clear NVRAM during system boot.

```
 Main   Advanced  PCIPnP   Boot   Security  Chipset   Exit
*******************************************************************
* Advanced PCI/PnP Settings                  **        Options    *
* *****************************************    **                  *
* WARNING: Setting wrong values in below sections  ** No          *
*          may cause system to malfunction.   ** Yes              *
*                                             **                  *
* Clear NVRAM                     [No]        **                  *
* Plug & Play O/S                 [No]        **                  *
* PCI Latency Timer               [64]        **                  *
* Allocate IRQ to PCI VGA    ***   Options   *** **               *
* Palette Snooping           * No           *   **                *
* PCI IDE BusMaster          * Yes          *   **                *
* OffBoard PCI/ISA IDE Card  *****************   **                *
*                                             **  *  Select Screen *
* IRQ3                            [Reserved]  ** **  Select Item   *
* IRQ4                            [Reserved]  ** +-  Change Option *
* IRQ5                            [Available] ** F1  General Help  *
* IRQ6                            [Available] ** F10 Save and Exit *
* IRQ7                            [Available] ** ESC Exit          *
* IRQ9                            [Available] **                   *
* IRQ10                           [Available] **                  *
*******************************************************************
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```

1.3.2 Plug & Play O/S

Set this value to allow the system to modify the settings for Plug and Play operating system support.

Option	Description
No	The *No* setting is for operating systems that do not meet the Plug and Play specifications. It allows the BIOS to configure all the devices in the system. This is the default setting.
Yes	The *Yes* setting allows the operating system to change the interrupt, I/O, and DMA settings. Set this option if the system is running Plug and Play aware operating systems.

```
_ Main    Advanced   PCIPnP    Boot    Security   Chipset    Exit
*******************************************************************************
* Advanced PCI/PnP Settings                        **        Options         *
* ********************************************       **                       *
* WARNING: Setting wrong values in below sections   ** No                    *
*          may cause system to malfunction.         ** Yes                   *
*                                                   **                       *
* Clear NVRAM                       [No]            **                       *
* Plug & Play O/S                   [No]            **                       *
* PCI Latency Timer                 [64]            **                       *
* Allocate IRQ to PCI VGA      ***    Options    ***  **                     *
* Palette Snooping             * No              *  **                       *
* PCI IDE BusMaster            * Yes             *  **                       *
* OffBoard PCI/ISA IDE Card    ********************  **                       *
*                                                   ** *   Select Screen     *
* IRQ3                          [Reserved]         ** **   Select Item        *
* IRQ4                          [Reserved]         ** +-   Change Option      *
* IRQ5                          [Available]        ** F1   General Help       *
* IRQ6                          [Available]        ** F10  Save and Exit      *
* IRQ7                          [Available]        ** ESC  Exit               *
* IRQ9                          [Available]        **                        *
* IRQ10                         [Available]        **                        *
*******************************************************************************
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```

1.3.3 PCI Latency Timer

Allow you to select the value in units of PCI clocks for all of the PCI device latency timer

register. Configuration option: 32, 64, 96, 128, 160, 192, 224, 248

Option	Description
32	This option sets the PCI latency to 32 PCI clock cycles.
64	This option sets the PCI latency to 64 PCI clock cycles. This is the default setting.
96	This option sets the PCI latency to 96 PCI clock cycles.
128	This option sets the PCI latency to 128 PCI clock cycles.
160	This option sets the PCI latency to 160 PCI clock cycles.
192	This option sets the PCI latency to 192 PCI clock cycles.
224	This option sets the PCI latency to 224 PCI clock cycles.
248	This option sets the PCI latency to 248 PCI clock cycles.

```
_ Main    Advanced   PCIPnP    Boot    Security   Chipset    Exit
*******************************************************************************
* Advanced PCI/PnP Settings                        **        Options         *
* ********************************************       **                       *
* WARNING: Setting wrong values in below sections   ** 32                    *
*          may cause system to malfunction.         ** 64                    *
*                                                   ** 96                    *
* Clear NVRAM                  ***    Options    ***  ** 128                  *
* Plug & Play O/S              * 32              *  ** 160                    *
* PCI Latency Timer            * 64             *  ** 192                     *
* Allocate IRQ to PCI VGA      * 96              *  ** 224                    *
* Palette Snooping             * 128             *  ** 248                    *
* PCI IDE BusMaster            * 160             *  **                        *
* OffBoard PCI/ISA IDE Card    * 192             *  **                        *
*                              * 224             *  ** *   Select Screen      *
* IRQ3                         * 248             *  ** **  Select Item         *
* IRQ4                         ********************  ** +-  Change Option       *
* IRQ5                          [Available]        ** F1   General Help       *
* IRQ6                          [Available]        ** F10  Save and Exit      *
* IRQ7                          [Available]        ** ESC  Exit               *
* IRQ9                          [Available]        **                        *
* IRQ10                         [Available]        **                        *
*******************************************************************************
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```

Set this value to allow the PCI Latency Timer to be adjusted. This option sets the latency

of all PCI devices on the PCI bus

This decides how long a PCI device can hog the PCI bus for , higher setting , hogs the bus a little longer , lower setting lets go quicker but stuff like some sound cards (PCI of course) will start to crackle , default on this board was default at 64.

1.3.4   Allocate IRQ to PCI VGA.

Set this value to allow or restrict the system from the giving the VGA adapter card address.
The Optimal and Fail-Safe default setting is Yes.

Option	Description
Yes	Set this value to allow the allocation of an IRQ to a VGA adapter card that uses the PCI local bus. This is the default setting.
No	Set this value to prevent the allocation of an IRQ to a VGA adapter card that uses the PCI local bus.

```
_ Main    Advanced    PCIPnP    Boot    Security    Chipset    Exit
***************************************************************************
* Advanced PCI/PnP Settings                        **      Options       *
* ***********************************************   **                    *
* WARNING: Setting wrong values in below sections   ** Yes                *
*          may cause system to malfunction.         ** No                 *
*                                                   **                    *
* Clear NVRAM                    [No]               **                    *
* Plug & Play O/S                [No]               **                    *
* PCI Latency Timer              [64]               **                    *
* Allocate IRQ to PCI VGA    ***    Options    ***  **                    *
* Palette Snooping            * Yes             *   **                    *
* PCI IDE BusMaster           * No              *   **                    *
* OffBoard PCI/ISA IDE Card   *********************  **                    *
*                                                   ** *    Select Screen *
* IRQ3                           [Reserved]         ** **   Select Item   *
* IRQ4                           [Reserved]         ** +-   Change Option *
* IRQ5                           [Available]        ** F1   General Help  *
* IRQ6                           [Available]        ** F10  Save and Exit *
* IRQ7                           [Available]        ** ESC  Exit          *
* IRQ9                           [Available]        **                    *
* IRQ10                          [Available]        **                    *
***************************************************************************
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```

1.3.5 Palette Snooping

When set to "Enabled", the palette snooping feature informs the PCI devices that an ISA graphics device is installed in the system so that the latter can function correctly. Configuration options: [Disabled, Enabled].

Option	Description
Disabled	This is the default setting and should not be changed unless the VGA card manufacturer requires Palette Snooping to be Enabled.
Enabled	This setting informs the PCI devices that an ISA based Graphics device is installed in the system. It does this so the ISA based Graphics card will function correctly. This does not necessarily indicate a physical ISA adapter card. The graphics chipset can be mounted on a PCI card. Always check with your adapter card's manuals first, before modifying the default settings in the BIOS.

```
_ Main    Advanced   PCIPnP   Boot    Security   Chipset    Exit
*******************************************************************************
* Advanced PCI/PnP Settings                      **        Options          *
* *********************************************  **                         *
* WARNING: Setting wrong values in below sections **  Disabled              *
*          may cause system to malfunction.       **  Enabled               *
*                                                 **                        *
* Clear NVRAM                       [No]          **                        *
* Plug & Play O/S                   [No]          **                        *
* PCI Latency Timer                 [64]          **                        *
* Allocate IRQ to PCI VGA    ***    Options    ***  **                      *
* Palette Snooping           * Disabled        * **                         *
* PCI IDE BusMaster          * Enabled         * **                         *
* OffBoard PCI/ISA IDE Card  ********************  **                        *
*                                                 **  *   Select Screen     *
* IRQ3                          [Reserved]        ** **   Select Item        *
* IRQ4                          [Reserved]        ** +-   Change Option      *
* IRQ5                          [Available]       ** F1   General Help       *
* IRQ6                          [Available]       ** F10  Save and Exit      *
* IRQ7                          [Available]       ** ESC  Exit               *
* IRQ9                          [Available]       **                        *
* IRQ10                         [Available]       **                        *
*******************************************************************************
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```

1.3.6 PCI IDE BusMaster.

Set this value to allow or prevent the use of PCI IDE busmastering. The Optimal and Fail-Safe default setting is *Disabled*.

Option	Description
Disabled	Set this value to prevent PCI busmastering. This is the default setting.
Enabled	This option specifies that the IDE controller on the PCI local bus has mastering capabilities.

```
_ Main    Advanced   PCIPnP   Boot    Security   Chipset    Exit
*******************************************************************************
* Advanced PCI/PnP Settings                      **        Options          *
* *********************************************  **                         *
* WARNING: Setting wrong values in below sections **  Disabled              *
*          may cause system to malfunction.       **  Enabled               *
*                                                 **                        *
* Clear NVRAM                       [No]          **                        *
* Plug & Play O/S                   [No]          **                        *
* PCI Latency Timer                 [64]          **                        *
* Allocate IRQ to PCI VGA    ***    Options    ***  **                      *
* Palette Snooping           * Disabled        * **                         *
* PCI IDE BusMaster          * Enabled         * **                         *
* OffBoard PCI/ISA IDE Card  ********************  **                        *
*                                                 **  *   Select Screen     *
* IRQ3                          [Reserved]        ** **   Select Item        *
* IRQ4                          [Reserved]        ** +-   Change Option      *
* IRQ5                          [Available]       ** F1   General Help       *
* IRQ6                          [Available]       ** F10  Save and Exit      *
* IRQ7                          [Available]       ** ESC  Exit               *
* IRQ9                          [Available]       **                        *
* IRQ10                         [Available]       **                        *
*******************************************************************************
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```

1.3.7 OffBoard PCI/ISA IDE Card

Set this value to allow the OffBoard PCI/ISA IDE Card to be selected. The Optimal and

Fail-Safe default setting is *Auto*.

Option	Description
Auto	This setting will auto select the location of an OffBoard PCI IDE adapter card. This is the default setting.
PCI Slot1	This setting will select PCI Slot 1 as the location of the OffBoard PCI IDE adapter card. Use this setting only if there is an IDE adapter card installed in PCI Slot 1.
PCI Slot2	This setting will select PCI Slot 2 as the location of the OffBoard PCI IDE adapter card. Use this setting only if there is an IDE adapter card installed in PCI Slot 2.
PCI Slot3	This setting will select PCI Slot 3 as the location of the OffBoard PCI IDE adapter card. Use this setting only if there is an IDE adapter card installed in PCI Slot 3. This option is available even if the motherboard does not have a PCI Slot 3. If the motherboard does not have a PCI Slot 3, do not use this setting.
PCI Slot4	This setting will select PCI Slot 4 as the location of the OffBoard PCI IDE adapter card. Use this setting only if there is an IDE adapter card installed in PCI Slot 4. This option is available even if the motherboard does not have a PCI Slot 4. If the motherboard does not have a PCI Slot 4, do not use this setting.
PCI Slot5	This setting will select PCI Slot 5 as the location of the OffBoard PCI IDE adapter card. Use this setting only if there is an IDE adapter card installed in PCI Slot 5. This option is available even if the motherboard does not have a PCI Slot 5. If the motherboard does not have a PCI Slot 5, do not use this setting.
PCI Slot6	This setting will select PCI Slot 6 as the location of the OffBoard PCI IDE adapter card. Use this setting only if there is an IDE adapter card installed in PCI Slot 6. This option is available even if the motherboard does not have a PCI Slot 6. If the motherboard does not have a PCI Slot 6, do not use this setting.

```
 Main    Advanced   PCIPnP    Boot    Security   Chipset    Exit
*****************************************************************************
* Advanced PCI/PnP Settings               **         Options            *
* ***************************************************                    *
* WARNING: Setting wrong values in below sections  ** Auto              *
*          may cause system to malfunction.        ** PCI Slot1         *
*                                                  ** PCI Slot2         *
* Clear NVRAM                  ***    Options   ***  ** PCI Slot3        *
* Plug & Play O/S              * Auto            *   ** PCI Slot4        *
* PCI Latency Timer            * PCI Slot1       *   ** PCI Slot5        *
* Allocate IRQ to PCI VGA      * PCI Slot2       *   ** PCI Slot6        *
* Palette Snooping             * PCI Slot3       *   **                 *
* PCI IDE BusMaster            * PCI Slot4       *   **                 *
* OffBoard PCI/ISA IDE Card    * PCI Slot5       *  ▌**                 *
*                              * PCI Slot6       *   **  *  Select Screen *
* IRQ3                         ******************* ** **    Select Item  *
* IRQ4                           [Reserved]        ** +-   Change Option *
* IRQ5                           [Available]       ** F1   General Help  *
* IRQ6                           [Available]       ** F10  Save and Exit *
* IRQ7                           [Available]       ** ESC  Exit          *
* IRQ9                           [Available]       **                   *
* IRQ10                          [Available]       **                   *
*****************************************************************************
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```

1.3.8 IRQ

This item can select the IRQ with Available or Reserved. And the default of IRQ3, 4 are

Reserved and others are Available. When you set available, the specified IRQ is to be used by

a PCI/PnP device; as you set reserved, the IRQ will reserved for legacy ISA devices.

Interrupt	Option	Description
IRQ3 IRQ4 IRQ5 IRQ7	Available	This setting allows the specified IRQ to be used by a PCI/PnP device. This is the default setting.
IRQ9 IRQ10 IRQ11 IRQ14 IRQ15	Reserved	This setting allows the specified IRQ to be used by a legacy ISA device.

```
 _ Main   Advanced   PCIPnP   Boot   Security   Chipset   Exit
**********************************************************************
* Allocate IRQ to PCI VGA        [No]          **          Options     *
* Palette Snooping               [Disabled]    **                      *
* PCI IDE BusMaster              [Disabled]    ** Yes                   *
* OffBoard PCI/ISA IDE Card      [Auto]        ** No                    *
*                                              **                       *
* IRQ3                           [Reserved]    **                       *
* IRQ4                           [Reserved]    **                       *
* IRQ5                           [Available]   **                       *
* IRQ6                           [Available]   **                       *
* IRQ7                           [Available]   **                       *
* IRQ9                           [Available]   **                       *
* IRQ10                          [Available]   **                       *
* IRQ11                          [Available]   ** *   Select Screen     *
* IRQ12                          [Available]   ** **  Select Item       *
* IRQ14                          [Available]   ** +-  Change Option      *
* IRQ15                          [Available]   ** F1  General Help       *
*                                              ** F10 Save and Exit      *
* DMA Channel 0                  [Available]   ** ESC Exit               *
* DMA Channel 1                  [Available]   **                        *
* DMA Channel 3                  [Available]   **                        *
**********************************************************************
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```

1.3.9 DMA Channel

This item can select the DMA Channel for Available or Reserved. When set to Available the specified DMA is available for used by PCI/PnP devices; when set to reserved , the specified DMA to be used by a legacy ISA device.

DMA Channel	Option	Description
DMA Channel 0 DMA Channel 1 DMA Channel 3	Available	This setting allows the specified DMA to be used by PCI/PnP device. This is the default setting.
DMA Channel 5 DMA Channel 6 DMA Channel 7	Reserved	This setting allows the specified DMA to be used by a legacy ISA device.

```
  Main     Advanced    PCIPnP    Boot    Security    Chipset    Exit
*****************************************************************************
* IRQ3                           [Reserved]       **        Options       *
* IRQ4                           [Reserved]       **                      *
* IRQ5                           [Available]      ** Disabled             *
* IRQ6                           [Available]      ** 16k                  *
* IRQ7                           [Available]      ** 32k                  *
* IRQ9                           [Available]      ** 64k                  *
* IRQ10                          [Available]      **                      *
* IRQ11                          [Available]      **                      *
* IRQ12                          [Available]      **                      *
* IRQ14                          [Available]      **                      *
* IRQ15                          [Available]      **                      *
*                                                 **                      *
* DMA Channel 0                  [Available]      ** *   Select Screen    *
* DMA Channel 1                  [Available]      ** **  Select Item      *
* DMA Channel 3                  [Available]      ** +-  Change Option    *
* DMA Channel 5                  [Available]      ** F1  General Help     *
* DMA Channel 6                  [Available]      ** F10 Save and Exit    *
* DMA Channel 7                  [Available]      ** ESC Exit             *
*                                                 **                      *
* Reserved Memory Size           [Disabled]       **                      *
*****************************************************************************
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```

1.3.10 Reserved Memory Size

Set this value to allow the system to reserve memory that is used by ISA devices. The optimal and Fail-Safe default setting is *Disabled.*

Option	Description
Disabled	Set this value to prevent BIOS from reserving memory to ISA devices.
16K	Set this value to allow the system to reserve 16K of the system memory to the ISA devices.
32K	Set this value to allow the system to reserve 32K of the system memory to the ISA devices.
64K	Set this value to allow the system to reserve 64K of the system memory to the ISA devices.

```
  Main     Advanced    PCIPnP    Boot    Security    Chipset    Exit
*****************************************************************************
* IRQ3                           [Reserved]       **        Options       *
* IRQ4                           [Reserved]       **                      *
* IRQ5                           [Available]      ** Disabled             *
* IRQ6                           [Available]      ** 16k                  *
* IRQ7                           [Available]      ** 32k                  *
* IRQ9                           [Available]      ** 64k                  *
* IRQ10                          [Available]      **                      *
* IRQ11              ***  Options    ***          **                      *
* IRQ12              * Disabled        *          **                      *
* IRQ14              * 16k             *          **                      *
* IRQ15              * 32k             *          **                      *
*                    * 64k             *          **                      *
* DMA Channel 0      *****************************  ** *   Select Screen   *
* DMA Channel 1                  [Available]      ** **  Select Item      *
* DMA Channel 3                  [Available]      ** +-  Change Option    *
* DMA Channel 5                  [Available]      ** F1  General Help     *
* DMA Channel 6                  [Available]      ** F10 Save and Exit    *
* DMA Channel 7                  [Available]      ** ESC Exit             *
*                                                 **                      *
* Reserved Memory Size           [Disabled]       **                      *
*****************************************************************************
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```

1.4 Boot

The Boot menu items allow you to change the system boot options. Select an item then press Enter to display the sub-menu.

1.4.1 Boot Settings Configuration

```
                               Boot
********************************************************************************
*  Boot Settings Configuration                    *           Options         *
*  ************************************************ *                          *
*  Quick Boot                     [Enabled]        * Disabled                  *
*  Quiet Boot                     [Disabled]       * Enabled                   *
*  AddOn ROM Display Mode         [Force BIOS]     *                           *
*  Bootup Num-Lock                [On]             *                           *
*  PS/2 Mouse Support             [Auto]           *                           *
*  Wait For 'F1' If Error         [Disabled]       *                           *
*  Hit 'DEL' Message Display      [Enabled]        *                           *
*  Interrupt 19                                    *                           *
*  Boot From LAN                  [Disabled]       *                           *
*  Beep Function                  [Disabled]       *                           *
*  OnBoard Virtual Flash FDD      [Disabled]       * *     Select Screen       *
*                                                  * **    Select Item         *
*                                                  * +-    Change Option        *
*                                                  * F1    General Help         *
*                                                  * F10   Save and Exit        *
*                                                  * ESC   Exit                 *
*                                                  *                           *
*                                                  *                           *
********************************************************************************
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```

Allow you to configure the system boot setting with bellow submenus.

Quick Boot

Set the value to *Enable* to allow the BIOS to skip some Power On Self Tests (POST) while booting to decrease the time needed to boot the system. When you set the value to Disable the BIOS will performs all the POST items.

Option	Description
Disabled	Set this value to allow the BIOS to perform all POST tests.
Enabled	Set this value to allow the BIOS to skip certain POST tests to boot faster.

```
                              Boot
**********************************************************************
* Boot Settings Configuration           *        Options           *
* ************************************** *                          *
* Quick Boot                 [Enabled]  * Disabled                 *
* Quiet Boot                 [Disabled] * Enabled                  *
* AddOn ROM Display Mode      [Force BIOS] *                        *
* Bootup Num-Lock             [On]      *                          *
* PS/2 Mouse Support          [Auto]    *                          *
* Wait For 'F1' If Error      [Disabled]*                          *
* Hit 'DEL' Message Display  *** Options ***                       *
* Interrupt 19 Capture       * Disabled        *                   *
* Boot From LAN              * Enabled         *                   *
* Beep Function              ********************                   *
* OnBoard Virtual Flash FDD   [Disabled]*  *    Select Screen      *
*                                       *  **   Select Item        *
*                                       *  +-   Change Option       *
*                                       *  F1   General Help        *
*                                       *  F10  Save and Exit       *
*                                       *  ESC  Exit                *
*                                       *                          *
*                                       *                          *
**********************************************************************
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```

Quiet Boot

Set this value to allow the boot up screen options to be modified between POST messages or OEM logo.

The Optimal and Fail-Safe default setting is *Enabled*.

Option	Description
Disabled	Set this value to allow the computer system to display the POST messages.
Enabled	Set this value to allow the computer system to display the OEM logo. This is the default setting.

```
                              Boot
**********************************************************************
* Boot Settings Configuration           *        Options           *
* ************************************** *                          *
* Quick Boot                 [Enabled]  * Disabled                 *
* Quiet Boot                 [Disabled] * Enabled                  *
* AddOn ROM Display Mode      [Force BIOS] *                        *
* Bootup Num-Lock             [On]      *                          *
* PS/2 Mouse Support          [Auto]    *                          *
* Wait For 'F1' If Error      [Disabled]*                          *
* Hit 'DEL' Message Display  *** Options ***                       *
* Interrupt 19 Capture       * Disabled        *                   *
* Boot From LAN              * Enabled         *                   *
* Beep Function              ********************                   *
* OnBoard Virtual Flash FDD   [Disabled]*  *    Select Screen      *
*                                       *  **   Select Item        *
*                                       *  +-   Change Option       *
*                                       *  F1   General Help        *
*                                       *  F10  Save and Exit       *
*                                       *  ESC  Exit                *
*                                       *                          *
*                                       *                          *
**********************************************************************
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```

AddOn ROM Display Mode

Set this option to display add-on ROM (read-only memory) messages. The Optimal and

Fail-Safe default setting is Force BIOS. An example of this is a SCSI BIOS or VGA

BIOS.

Option	Description
Force BIOS	Set this value to allow the computer system to force a third party BIOS to display during system boot. This is the default setting.
Keep Current	Set this value to allow the computer system to display the ezPORT information during system boot.

```
                              Boot
****************************************************************************
*  Boot Settings Configuration                      *        Options       *
* ****************************************************  *                    *
*  Quick Boot                    [Enabled]           *  Force BIOS          *
*  Quiet Boot                    [Disabled]          *  Keep Current        *
*  AddOn ROM Display Mode        [Force BIOS]        *                      *
*  Bootup Num-Lock               [On]                *                      *
*  PS/2 Mouse Support            [Auto]              *                      *
*  Wait For 'F1' If Error        [Disabled]          *                      *
*  Hit 'DEL' Message Display   ***    Options    ***  *                      *
*  Interrupt 19 Capture        *  Force BIOS       *  *                      *
*  Boot From LAN               *  Keep Current      *  *                      *
*  Beep Function               *********************  *                      *
*  OnBoard Virtual Flash FDD     [Disabled]          *  *      Select Screen  *
*                                                    *  **     Select Item    *
*                                                    *  +-     Change Option  *
*                                                    *  F1     General Help   *
*                                                    *  F10    Save and Exit  *
*                                                    *  ESC    Exit           *
*                                                    *                       *
*                                                    *                       *
****************************************************************************
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```

Bootup Num-Lock

Set this value to allow the Number Lock setting to be modified during boot up. The

Optimal and Fail-Safe default setting is On.

Option	Description
Off	This option does not enable the keyboard Number Lock automatically. To use the 10-keys on the keyboard, press the Number Lock key located on the upper left-hand corner of the 10-key pad. The Number Lock LED on the keyboard will light up when the Number Lock is engaged.
On	Set this value to allow the Number Lock on the keyboard to be enabled automatically when the computer system is boot up. This allows the immediate use of 10-keys numeric keypad located on the right side of the keyboard. To confirm this, the Number Lock LED light on the keyboard will be lit. This is the default setting.

```
                                      Boot
*****************************************************************************
* Boot Settings Configuration                      *          Options       *
* ************************************************* *                        *
* Quick Boot                        [Enabled]      * Off                    *
* Quiet Boot                        [Disabled]     * On                     *
* AddOn ROM Display Mode            [Force BIOS]    *                        *
* Bootup Num-Lock                   [On]           *                        *
* PS/2 Mouse Support                [Auto]         *                        *
* Wait For 'F1' If Error            [Disabled]     *                        *
* Hit 'DEL' Message Display    ***     Options    ***                       *
* Interrupt 19 Capture         * Off               *                        *
* Boot From LAN                * On                *                        *
* Beep Function                *********************                        *
* OnBoard Virtual Flash FDD       [Disabled]       *  *    Select Screen    *
*                                                  *  **   Select Item      *
*                                                  *  +-   Change Option     *
*                                                  *  F1   General Help      *
*                                                  *  F10  Save and Exit     *
*                                                  *  ESC  Exit              *
*                                                  *                        *
*                                                  *                        *
*****************************************************************************
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```

PS/2 Mouse Support

Set this value to allow the PS/2 mouse support to be adjusted. The Optimal and Fail-Safe default setting

is Enabled.

Option	Description
Disabled	This option will prevent the PS/2 mouse port from using system resources and will prevent the port from being active. Use this setting if installing a serial mouse.
Enabled	Set this value to allow the system to use a PS/2 mouse. This is the default setting.

```
                                      Boot
*****************************************************************************
* Boot Settings Configuration                      *          Options       *
* ************************************************* *                        *
* Quick Boot                        [Enabled]      * Disabled               *
* Quiet Boot                        [Disabled]     * Enabled                *
* AddOn ROM Display Mode            [Force BIOS]    * Auto                   *
* Bootup Num-Lock                   [On]           *                        *
* PS/2 Mouse Support                [Auto]         *                        *
* Wait For 'F1' If Error       ***     Options    ***                       *
* Hit 'DEL' Message Display    * Disabled          *                        *
* Interrupt 19 Capture         * Enabled           *                        *
* Boot From LAN                * Auto              *                        *
* Beep Function                *********************                        *
* OnBoard Virtual Flash FDD       [Disabled]       *  *    Select Screen    *
*                                                  *  **   Select Item      *
*                                                  *  +-   Change Option     *
*                                                  *  F1   General Help      *
*                                                  *  F10  Save and Exit     *
*                                                  *  ESC  Exit              *
*                                                  *                        *
*                                                  *                        *
*****************************************************************************
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```

Wait For "F1" If Error

Set this value to allow the Wait for 'F1' Error setting to be modified. The Optimal and

Fail-Safe default setting is *Enabled*

Option	Description
Disabled	This prevents the ezPORT to wait on an error for user intervention. This setting should be used if there is a known reason for a BIOS error to appear. An example would be a system administrator must remote boot the system. The computer system does not have a keyboard currently attached. If this setting is set, the system will continue to boot up in to the operating system. If 'F1' is enabled, the system will wait until the BIOS setup is entered.
Enabled	Set this value to allow the system BIOS to wait for any error. If an error is detected, pressing <F1> will enter Setup and the BIOS setting can be adjusted to fix the problem. This normally happens when upgrading the hardware and not setting the BIOS to recognize it. This is the default setting.

```
                                  Boot
*****************************************************************
* Boot Settings Configuration                    *      Options        *
* ******************************************** *                        *
* Quick Boot                    [Enabled]      * Disabled              *
* Quiet Boot                    [Disabled]     * Enabled               *
* AddOn ROM Display Mode        [Force BIOS]   *                       *
* Bootup Num-Lock               [On]           *                       *
* PS/2 Mouse Support            [Auto]         *                       *
* Wait For 'F1' If Error        [Disabled]     *                       *
* Hit 'DEL' Message Display   ***    Options   ***                     *
* Interrupt 19 Capture        * Disabled        *  *                   *
* Boot From LAN               * Enabled         *  *                   *
* Beep Function               ********************  *                  *
* OnBoard Virtual Flash FDD     [Disabled]      * *     Select Screen  *
*                                               * **    Select Item    *
*                                               * +-    Change Option   *
*                                               * F1    General Help    *
*                                               * F10   Save and Exit   *
*                                               * ESC   Exit            *
*                                               *                       *
*                                               *                       *
*****************************************************************
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```

Hit "DEL" Massage Display

Set this value to allow the *Hit "DEL" to enter Setup* Message Display to be modified.

The Optimal and Fail-Safe default setting is *Enabled*.

Option	Description
Disabled	This prevents the ezPORT to display Hit Del to enter Setup during memory initialization. If Quiet Boot is enabled, the Hit 'DEL' message will not display.
Enabled	This allows the ezPORT to display Hit Del to enter Setup during memory initialization. This is the default setting.

```
                         Boot
***************************************************************
* Boot Settings Configuration              *        Options       *
* ***************************************** *                      *
* Quick Boot                   [Enabled]    * Disabled            *
* Quiet Boot                   [Disabled]   * Enabled             *
* AddOn ROM Display Mode       [Force BIOS] *                      *
* Bootup Num-Lock              [On]         *                      *
* PS/2 Mouse Support           [Auto]       *                      *
* Wait For 'F1' If Error       [Disabled]   *                      *
* Hit 'DEL' Message Display  ***   Options   *** *                 *
* Interrupt 19 Capture        * Disabled      * *                  *
* Boot From LAN               * Enabled       * *                  *
* Beep Function               ************************* *          *
* OnBoard Virtual Flash FDD    [Disabled]    * *   Select Screen   *
*                                            * **  Select Item     *
*                                            * +-  Change Option   *
*                                            * F1  General Help    *
*                                            * F10 Save and Exit   *
*                                            * ESC Exit            *
*                                            *                      *
*                                            *                      *
***************************************************************
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```

Interrup 19 Capture

Set this value to allow option ROMs such as network controllers to trap BIOS interrupt

19.

Option	Description
Disabled	The BIOS prevents option ROMs from trapping interrupt 19.
Enabled	The BIOS allows option ROMs to trap interrupt 19.

```
                         Boot
***************************************************************
* Boot Settings Configuration              *        Options       *
* ***************************************** *                      *
* Quick Boot                   [Enabled]    * Disabled            *
* Quiet Boot                   [Disabled]   * Enabled             *
* AddOn ROM Display Mode       [Force BIOS] *                      *
* Bootup Num-Lock              [On]         *                      *
* PS/2 Mouse Support           [Auto]       *                      *
* Wait For 'F1' If Error       [Disabled]   *                      *
* Hit 'DEL' Message Display  ***   Options   *** *                 *
* Interrupt 19 Capture        * Disabled      * █ *                *
* Boot From LAN               * Enabled       * *                  *
* Beep Function               ************************* *          *
* OnBoard Virtual Flash FDD    [Disabled]    * *   Select Screen   *
*                                            * **  Select Item     *
*                                            * +-  Change Option   *
*                                            * F1  General Help    *
*                                            * F10 Save and Exit   *
*                                            * ESC Exit            *
*                                            *                      *
*                                            *                      *
***************************************************************
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```

Boot From LAN

This allow you to select the value of the Lan boot Function

Beep Function

Set this value to allow the system to enable or disable generating a beep during posting success.

OnBoard Virtual Flash FDD

This allow you to "Enable" or "Disable" the onboard SPI FLASH-DISK

```
 _                              Boot
*****************************************************************************
* Boot Settings Configuration          *        Options              *
* ************************************* *                             *
* Quick Boot                 [Enabled]  * Disabled                   *
* Quiet Boot                 [Disabled] * Enabled                    *
* AddOn ROM Display Mode      [Force BIOS] * Read Only                *
* Bootup Num-Lock            [On]       *                             *
* PS/2 Mouse Support         [Auto]     *                             *
* Wait For 'F1' If Error    ***   Options   ***  *                   *
* Hit 'DEL' Message Display  * Disabled          *  *                *
* Interrupt 19 Capture       * Enabled           *  *                *
* Boot From LAN              * Read Only          *  *                *
* Beep Function              ********************  *                  *
* OnBoard Virtual Flash FDD    [Disabled]        ▮ * *    Select Screen *
*                                        * **    Select Item          *
*                                        * +-    Change Option         *
*                                        * F1    General Help          *
*                                        * F10   Save and Exit         *
*                                        * ESC   Exit                  *
*                                        *                             *
*                                        *                             *
*****************************************************************************
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```

1.4.2 Boot Device Priority

```
 _                              Boot
*****************************************************************************
* Boot Device Priority                  *                             *
* ************************************* *                             *
* 1st Boot Device          [USB:JetFlash TS256] *                     *
* 2nd Boot Device          [CD/DVD]     *                             *
* 3rd Boot Device          [Hard Drive] *                             *
*                                        *                             *
*                                        *                             *
*                                        *                             *
*                                        *                             *
*                                        *                             *
*                                        *                             *
*                                        * *    Select Screen          *
*                                        * **    Select Item           *
*                                        * +-    Change Option          *
*                                        * F1    General Help           *
*                                        * F10   Save and Exit          *
*                                        * ESC   Exit                   *
*                                        *                             *
*                                        *                             *
*****************************************************************************
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```

Use this screen to specify the order in which the system checks for the device to boot

from. To access this screen, select Boot Device Priority on the Boot Setup screen and

press <Enter>.

3.10 Security

The Security menu items allow you to change the system security settings. Select an item then press Enter to display the configuration options.

```
 Main    Advanced   PCIPnP    Boot   Security   Chipset    Exit
*********************************************************************
* Security Settings                              *                  *
* ********************************************* *                  *
* Supervisor Password :Not Installed             *                  *
* User Password       :Not Installed             *                  *
*                                                *                  *
* Change Supervisor Password                     *                  *
* Change User Password                           *                  *
*                                                *                  *
* Boot Sector Virus Protection   [Disabled]      *                  *
*                                                *                  *
*                                                *                  *
*                                                *                  *
*                                                *  *    Select Screen  *
*                                                *  **   Select Item    *
*                                                * Enter  Change        *
*                                                * F1     General Help   *
*                                                * F10    Save and Exit  *
*                                                * ESC    Exit           *
*                                                *                  *
*                                                *                  *
*********************************************************************
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```

Supervisor Password

Indicate whether a supervisor password has been set. If the password has been installed, *Installed* displays. If not, *Not Installed* displays.

User Password

Indicate whether a user password has been set. If the password has been installed, *Installed* displays. If not, *Not Installed* display

Change Supervisor Password

```
_ Main    Advanced   PCIPnP    Boot   Security   Chipset    Exit
*********************************************************************
* Security Settings                              *                  *
* ********************************************* *                  *
* Supervisor Password :Not Installed             *                  *
* User Password       :Not Installed             *                  *
*                                                *                  *
* Change Supervisor Password                     *                  *
* Change User Password                           *                  *
*                   ***********************************             *
* Boot Sector Virus Prote*                       *                  *
*                        * Enter New Password  [      ] *           *
*                        *                       *                  *
*                        ***********************************        *
*                                                *  *    Select Screen  *
*                                                *  **   Select Item    *
*                                                * Enter  Change        *
*                                                * F1     General Help   *
*                                                * F10    Save and Exit  *
*                                                * ESC    Exit           *
*                                                *                  *
*                                                *                  *
*********************************************************************
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```

Setup for AMIBIOS

Select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Select Change Supervisor Password from the Security Setup menu and press <Enter>.
Enter New Password:

appears. Type the password and press <Enter>. The screen does not display the characters entered. Retype the password as prompted and press <Enter>. If the password confirmation is incorrect, an error message appears. The password is stored in NVRAM

Change User Password

Select this option and press <Enter> to access the sub menu. You can use the sub menu to change the user password.

Clear User Password

Select this option and press <Enter> to access the sub menu. You can use the sub menu to clear the user password.

Select Change User Password from the Security Setup menu and press <Enter>.
Enter New Password:

appears. Type the password and press <Enter>. The screen does not display the characters entered. Retype the password as prompted and press <Enter>. If the password

confirmation is incorrect, an error message appears. The password is stored in NVRAM

Clear User Password

Select Clear User Password from the Security Setup menu and press <Enter>.

Clear New Password

[Ok] [Cancel]

appears. Type the password and press <Enter>. The screen does not display the characters

entered. Retype the password as prompted and press <Enter>. If the password confirmation is

incorrect, an error message appears. The password is stored in NVRAM

Boot Sector Virus Protection

This option is near the bottom of the Security Setup screen. The Optimal and Fail-Safe default

setting is *Disabled*

Option	Description
Disabled	Set this value to prevent the Boot Sector Virus Protection. This is the default setting.
Enabled	Select Enabled to enable boot sector protection. ezPORT displays a warning when any program (or virus) issues a Disk Format command or attempts to write to the boot sector of the hard disk drive. If enabled, the following appears when a write is attempted to the boot sector. You may have to type N several times to prevent the boot sector write. Boot Sector Write! Possible VIRUS: Continue (Y/N)? _ The following appears after any attempt to format any cylinder, head, or sector of any hard disk drive via the BIOS INT 13 Hard disk drive Service: Format!!! Possible VIRUS: Continue (Y/N)? _

1.6 Chipset

1.6.1 NorthBridge Configuration

DRAM Timing Setting By

Allow you to set DRAM timing from BIOS or Manual

CPU Speed Setting by

Allow you to regulate CPU speed.

1.6.2 SouthBridge Configuration

You can use this screen to select options for the South Bridge Configuration. South Bridge is a chipset on the motherboard that controls the basic I/O functions,. Use the up and down. <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option.

P.O. S. T Forward, To

This allow you to set the P.O.S.T Forward to COM1 port and then the post will display on the screen which connect with COM1

```
                                              Chipset
****************************************************************************
* South Bridge Chipset Configuration            *        Options         *
* **********************************************  *                        *
* P.O.S.T. Forward To          [Disabled]        * Disabled               *
*                                                * COM1                    *
* * ISA Configuration                            *                         *
* * PWM Configuration                            *                         *
* * Serial/Parallel Port Configuration           *                         *
* * WatchDog Configuration                       *                         *
* * GPIO Configuration                           *                         *
* * GPCS Configuration                           *                         *
* * Redundancy Control Configuration             *                         *
*                                                *                         *
*                                                * *    Select Screen      *
*                                                * **   Select Item        *
*                                                * +-   Change Option       *
*                                                * F1   General Help        *
*                                                * F10  Save and Exit       *
*                                                * ESC  Exit                *
*                                                *                         *
*                                                *                         *
****************************************************************************
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```

ISA Configuration

This allows you to set the ISA bus frequency and to select the clock value of I/O and Memory.

```
                                              Chipset
****************************************************************************
* ISA Clock                     [8.3MHz]         *        Options         *
* ISA 16bits I/O wait-state     [1 clock]        *                         *
* ISA 8bits I/O wait-state      [4 clock]        * 8.3MHz                  *
* ISA 16bits Memory wait-state  [1 clock]        * 16.6MHz                 *
* ISA 8bits Memory wait-state   [4 clock]        *                         *
*                                                *                         *
*                                                *                         *
*                                                *                         *
*                                                *                         *
*                                                *                         *
*                                                *                         *
*                                                * *    Select Screen      *
*                                                * **   Select Item        *
*                                                * +-   Change Option       *
*                                                * F1   General Help        *
*                                                * F10  Save and Exit       *
*                                                * ESC  Exit                *
*                                                *                         *
*                                                *                         *
****************************************************************************
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```

Setup for AMIBIOS

PWM Configuration

This option allows you indicate the PWM to Internal or External clock.

```
                                                    Chipset
*****************************************************************************
* PWM Timer0                      [Internal 1.19MHz]  *       Options         *
* PWM Timer1                      [Internal 1.19MHz]  *                       *
* PWM Timer2                      [Internal 1.19MHz]  * Internal 1.19MHz      *
*                                                     * External clock        *
*                                                     *                       *
*                                                     *                       *
*                                                     *                       *
*                                                     *                       *
*                        ***    Options    ***        *                       *
*                        * Internal 1.19MHz    *      *                       *
*                        * External clock      *      *                       *
*                        ***********************       *                       *
*                                                     *  *     Select Screen  *
*                                                     * **     Select Item    *
*                                                     * +-     Change Option   *
*                                                     * F1     General Help    *
*                                                     * F10    Save and Exit   *
*                                                     * ESC    Exit            *
*                                                     *                       *
*                                                     *                       *
*****************************************************************************
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```

Serial/Parallel Port Configuration

This option specifies the serial port address and the parallel port mode and select the IRQ of Serial/Parallel Port.

Option	Description
Disabled	Set this value to prevent the serial port from accessing any system resources. When this option is set to *Disabled*, the serial port physically becomes unavailable.
3F8/IRQ4	Set this value to allow the serial port to use 3F8 as its I/O port address and IRQ 4 for the interrupt address. This is the default setting. The majority of serial port 1 or COM1 ports on computer systems use IRQ4 and I/O Port 3F8 as the standard setting. The most common serial device connected to this port is a mouse. If the system will not use a serial device, it is best to set this port to *Disabled*.
2F8/IRQ3	Set this value to allow the serial port to use 2F8 as its I/O port address and IRQ 3 for the interrupt address. If the system will not use a serial device, it is best to set this port to *Disabled*.
3E8/IRQ4	Set this value to allow the serial port to use 3E8 as its I/O port address and IRQ 4 for the interrupt address. If the system will not use a serial device, it is best to set this port to *Disabled*.
2E8/IRQ3	Set this value to allow the serial port to use 2E8 as its I/O port address and IRQ 3 for the interrupt address. If the system will not use a serial device, it is best to set this port to *Disabled*.

Option	Description
Disabled	Set this value to prevent the parallel port from accessing any system resources. When the value of this option is set to *Disabled*, the printer port becomes unavailable.
378	Set this value to allow the parallel port to use 378 as its I/O port address. This is the default setting. The majority of parallel ports on computer systems use IRQ7 and I/O Port 378H as the standard setting.
278	Set this value to allow the parallel port to use 278 as its I/O port address.

Option	Description
Normal	Set this value to allow the standard parallel port mode to be used. This is the default setting.
Bi-Directional	Set this value to allow data to be sent to and received from the parallel port.
EPP	The parallel port can be used with devices that adhere to the Enhanced Parallel Port (EPP) specification. EPP uses the existing parallel port signals to provide asymmetric bi-directional data transfer driven by the host device.
ECP	The parallel port can be used with devices that adhere to the Extended Capabilities Port (ECP) specification. ECP uses the DMA protocol to achieve data transfer rates up to 2.5 Megabits per second. ECP provides symmetric bi-directional communication.

Option	Description
5	Set this value to allow the serial port to use Interrupt 3.
7	Set this value to allow the serial port to use Interrupt 7. This is the default setting. The majority of parallel ports on computer systems use IRQ7 and I/O Port 378H as the standard setting.

```
                                                      Chipset
********************************************************************************
* SB Serial Port 1              [3F8]       *          Options          *
*      Serial Port IRQ 1        [IRQ4]      *                           *
*      Serial Port Boud Rate    [115200 BPS]* Disabled                  *
* PWM & COM2 Pin Select         [SB Serial Port 2] * 378               *
* SB Serial Port 2              [2F8]       * 278                       *
*      Serial Port IRQ 2        [IRQ3]      *                           *
*      Serial Port Boud Rate    [115200 BPS]*                           *
* SB Serial Port 3              [3E8]       *                           *
*      Serial Port IRQ 3        [IRQ10]     *                           *
*      Serial Port Boud Rate    [115200 BPS]*                           *
* SB Serial Port 4              [2E8]       *                           *
*      Serial Port IRQ 4        [IRQ11]     *                           *
*      Serial Port Boud Rate    [115200 BPS]* *      Select Screen      *
* SB Parallel Port Address      [378]       * **     Select Item        *
*      Parallel Port Mode       [BPP]       * +-     Change Option       *
*      Parallel Port IRQ        [IRQ7]      * F1     General Help       *
*                                           * F10    Save and Exit      *
*                                           * ESC    Exit               *
*                                           *                           *
*                                           *                           *
********************************************************************************
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```

WatchDog Configuration

This option allows you to stop or abort motion on all axes if an application dies. The way to set this up is via an application watchdog. This is where an application sets a value to a specific controller field. The controller monitors that field and will stop and/or abort all motion if the application fails to set the value of the watchdog field.

Watchdog Function

This option allows you to Disable or Enable the time-out function of watchdog timer.

Setup for AMIBIOS

```
                                              Chipset
*********************************************************************
* WatchDog 0 Function          [Enabled]      *        Options      *
*       WatchDog 0 Signal Select  [Reset]     *                     *
*       WatchDog 0 Timer       [64 Sec]       * Enabled             *
* WatchDog 1 Function          [Disabled]     * Disabled            *
*                                             *                     *
*                                             *                     *
*                                             *                     *
*                                             *                     *
*                                             *                     *
*                                             *                     *
*                                             *    Select Screen    *
*                                             * **   Select Item    *
*                                             * +-   Change Option   *
*                                             * F1   General Help    *
*                                             * F10  Save and Exit   *
*                                             * ESC  Exit            *
*                                             *                     *
*                                             *                     *
*********************************************************************
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```

Watchdog Signal Select

This defines the action that will be undertaken once the watchdog has timed out. The action can be either RESET, NMI or IRQ 3/4/5/6/7/9/10/11/12/14/15..

```
                                              Chipset
*********************************************************************
* WatchDog 0 Function          [Enabled]      *        Options      *
*       WatchDog 0 Signal Select  [Reset]     *                     *
*       WatchDog 0 Timer   ***   Options  *** * IRQ3                *
* WatchDog 1 Function       * IRQ3        *   * IRQ4                *
*                           * IRQ4        *   * IRQ5                *
*                           * IRQ5        *   * IRQ6                *
*                           * IRQ6        *   * IRQ7                *
*                           * IRQ7        *   * IRQ9                *
*                           * IRQ9        *   * IRQ10               *
*                           * IRQ10       *   * IRQ11               *
*                           * IRQ11       *   * IRQ12               *
*                           * IRQ12       *   *                     *
*                           * IRQ14       *   *    Select Screen    *
*                           * IRQ15       *   * **   Select Item    *
*                           * NMI         *   * +-   Change Option   *
*                           * Reset       *   * F1   General Help    *
*                           ************* *   * F10  Save and Exit   *
*                                             * ESC  Exit            *
*                                             *                     *
*                                             *                     *
*********************************************************************
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```

Watchdog Timer

Choose the time-out period 1/2/4/8/16/32/64/128/256 seconds. The watchdog timer is a down timer. If set to 16 seconds it will count down to 0 and invoke a RESET, NMI or IRQ. If during the countdown period the watchdog receives a reset signal it aborts the countdown and starts a new countdown sequence from 16.

Setup for AMIBIOS

```
                                              Chipset
*********************************************************************
* WatchDog 0 Function          [Enabled]      *      Options        *
*     WatchDog 0 Signal Select [Reset]        *                     *
*     WatchDog 0 Timer         [64 Sec]       * 1 Sec               *
* WatchDog 1 Function          [Disabled]     * 2 Sec               *
*                        *** Options ***      * 4 Sec               *
*                        * 1 Sec         *    * 8 Sec               *
*                        * 2 Sec         *    * 16 Sec              *
*                        * 4 Sec         *    * 32 Sec              *
*                        * 8 Sec         *    * 64 Sec              *
*                        * 16 Sec        *    * 128 Sec             *
*                        * 32 Sec        *    * 256 Sec             *
*                        * 64 Sec        *    *                     *
*                        * 128 Sec       *    * *    Select Screen  *
*                        * 256 Sec       *    * **   Select Item    *
*                        * 512 Sec       *    * +-   Change Option  *
*                        *****************    * F1   General Help   *
*                                             * F10  Save and Exit  *
*                                             * ESC  Exit           *
*                                             *                     *
*                                             *                     *
*********************************************************************
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```

GPIO Configuration

```
                                              Chipset
*********************************************************************
* GPIO PORT0 78H [07...00]     [IIIIIIII]     *      Options        *
* GPIO PORT1 79H [17...10]     [IIIIIIII]     *                     *
* GPIO PORT2 7AH [27...20]     [IIIIIIII]     * IIIIIIII            *
* PORT3 & SPI Pin Select       [GPIO PORT3]   * IIIIIIIO            *
*     GPIO PORT3 7BH [37...30] [IIIIIIII]     * IIIIIIOO            *
* PORT4 & COM1 Pin Select      [SB Serial Port 1] * IIIIIOOO        *
*                                             * IIIIOOOO            *
*                                             * IIIOOOOO            *
*                                             * IIOOOOOO            *
*                                             * IOOOOOOO            *
*                                             * OOOOOOOO            *
*                                             *                     *
*                                             * *    Select Screen  *
*                                             * **   Select Item    *
*                                             * +-   Change Option   *
*                                             * F1   General Help   *
*                                             * F10  Save and Exit  *
*                                             * ESC  Exit           *
*                                             *                     *
*********************************************************************
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```

```
                                                   Chipset
******************************************************************************
* GPIO PORT0 78H [07...00]        [IIIIIIII]     *        Options          *
* GPIO PORT1 79H [17...10]        [IIIIIIII]     *                         *
* GPIO PORT2 7AH [27...20]        [IIIIIIII]     * IIIIIIII                 *
* PORT3 & SPI Pin Select          [GPIO PORT3]   * IIIIIIIO                 *
*      GPIO PORT3 7BH [37...3***    Options    *** IIIIIIOO                 *
* PORT4 & COM1 Pin Select     * IIIIIIII         * IIIIIOOO                 *
*                             * IIIIIIIO       * * IIIIOOOO                 *
*                             * IIIIIIOO       * * IIIOOOOO                 *
*                             * IIIIIOOO       * * IIOOOOOO                 *
*                             * IIIIOOOO       * * IOOOOOOO                 *
*                             * IIIOOOOO       * * OOOOOOOO                 *
*                             * IIOOOOOO       * *                         *
*                             * IOOOOOOO       * * *    Select Screen      *
*                             * OOOOOOOO       * * **   Select Item        *
*                             ******************* * +-   Change Option      *
*                                                * F1   General Help       *
*                                                * F10  Save and Exit      *
*                                                * ESC  Exit               *
*                                                *                         *
*                                                *                         *
******************************************************************************
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```

```
                                                   Chipset
******************************************************************************
* GPIO PORT0 78H [07...00]        [IIIIIIII]     *        Options          *
* GPIO PORT1 79H [17...10]        [IIIIIIII]     *                         *
* GPIO PORT2 7AH [27...20]        [IIIIIIII]     * SPI Bus                 *
* PORT3 & SPI Pin Select          [GPIO PORT3]   * GPIO PORT3              *
*      GPIO PORT3 7BH [37...30]    [IIIIIIII]     *                         *
* PORT4 & COM1 Pin Select         [SB Serial Port 1] *                     *
*                                                *                         *
*                                                *                         *
*                                                *                         *
*                                                *                         *
*                      ***    Options    ***     *                         *
*                      * SPI Bus             *   *                         *
*                      * GPIO PORT3          *   *                         *
*                      *********************** *  *                         *
*                                                *                         *
*                                                * *    Select Screen      *
*                                                * **   Select Item        *
*                                                * +-   Change Option      *
*                                                * F1   General Help       *
*                                                * F10  Save and Exit      *
*                                                * ESC  Exit               *
*                                                *                         *
*                                                *                         *
******************************************************************************
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```

Allow you select the functions and what sensors or devices, if any, are connected to it.

GPIO port 0,1 and 2 are always free for use normally. If your system does not use external RTC and SPI, GPIO port 3 is also free for use. Developer also can disable COM1 to select GPIO port 4. The actual free GPIO pins depend on your system. Please check it before using GPIO.

GPCS Configuration

This option allow you to set address for Flash Disk devices as below

Instruction

Step1: Select "GPCS0 Command" to "MEMR/W 8bit"

Step2: Select "GPCS0 Start Address" to "0E0000 HEX"

Step3: Select "GPCS0 Size" to "64 KBYTE"

Step4: Select "GPCS1 Command" to "IOW 8bit"

Step5: Select "GPCS1 Start Address" to "000100 HEX"

Step6: Select "GPCS1 Size" to "2 BYTE"

```
                                              Chipset
**********************************************************************
*  GPCS0 Function              [Enabled]       *        Options       *
*     GPCS0 Command            [MEMR/W  8bit]  *                       *
*     GPCS0 Start Address      [000C8000]      * Enabled              *
*     GPCS0 Mask Compare Bit   [FFFFC000]      * Disabled             *
*  GPCS1 Function              [Disabled]      *                       *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*                                              *  *    Select Screen   *
*                                              *  **   Select Item     *
*                                              *  +-   Change Option    *
*                                              *  F1   General Help     *
*                                              *  F10  Save and Exit    *
*                                              *  ESC  Exit             *
*                                              *                       *
*                                              *                       *
**********************************************************************
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```

```
                                              Chipset
**********************************************************************
*  GPCS0 Function              [Enabled]       *        Options       *
*     GPCS0 Command            [MEMR/W  8bit]  *                       *
*     GPCS0 Start Address      [000C8000]      * Enabled              *
*     GPCS0 Mask Compare Bit   [FFFFC000]      * Disabled             *
*  GPCS1 Function              [Disabled]      *                       *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*                  ***    Options    ***       *                       *
*                  * Enabled            *      *                       *
*                  * Disabled           *      *                       *
*                  ***********************      *                       *
*                                              *  *    Select Screen   *
*                                              *  **   Select Item     *
*                                              *  +-   Change Option    *
*                                              *  F1   General Help     *
*                                              *  F10  Save and Exit    *
*                                              *  ESC  Exit             *
*                                              *                       *
*                                              *                       *
**********************************************************************
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```

```
                                              Chipset
**********************************************************************
*  GPCS0 Function              [Enabled]       *        Options       *
*     GPCS0 Command            [MEMR/W  8bit]  *                       *
*     GPCS0 Start Address      [000C8000]      * MEMR    8bit          *
*     GPCS0 Mask Compare Bit*** Options ***    * MEMR    16bit         *
*  GPCS1 Function            * MEMR    8bit  * * MEMW    8bit          *
*                           * MEMR    16bit * * MEMW    16bit         *
*                           * MEMW    8bit  * * MEMR/W  8bit          *
*                           * MEMW    16bit * * MEMR/W 16bit          *
*                           * MEMR/W  8bit  * * IOR     8bit          *
*                           * MEMR/W 16bit  * * IOR     16bit         *
*                           * IOR     8bit  * * IOW     8bit          *
*                           * IOR     16bit *                          *
*                           * IOW     8bit  * *  *    Select Screen   *
*                           * IOW     16bit * *  **   Select Item     *
*                           * IOR/W   8bit  * *  +-   Change Option    *
*                           * IOR/W   16bit * *  F1   General Help     *
*                           **************** *  F10  Save and Exit    *
*                                              *  ESC  Exit             *
*                                              *                       *
**********************************************************************
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```

Setup for AMIBIOS

DMP Electronics INC.

```
                                                  Chipset
*****************************************************************************
* GPCS0 Function                    [Enabled]       *                      *
*       GPCS0 Command               [MEMR/W  8bit]  *                      *
*       GPCS0 Start Address         [000C8000]      *                      *
*       GPCS0 Mask Compare Bit      [FFFFC000]      *                      *
* GPCS1 Function                    [Disabled]      *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *  *    Select Screen  *
*                                                   *  **   Select Item    *
*                                                   *  F1   General Help   *
*                                                   *  F10  Save and Exit  *
*                                                   *  ESC  Exit           *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*****************************************************************************
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```

```
                                                  Chipset
*****************************************************************************
* GPCS0 Function                    [Enabled]       *                      *
*       GPCS0 Command               [MEMR/W  8bit]  *                      *
*       GPCS0 Start Address         [000C8000]      *                      *
*       GPCS0 Mask Compare Bit      [FFFFC000]      *                      *
* GPCS1 Function                    [Disabled]      *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*                                                   *  *    Select Screen  *
*                                                   *  **   Select Item    *
*                                                   *  F1   General Help   *
*                                                   *  F10  Save and Exit  *
*                                                   *  ESC  Exit           *
*                                                   *                      *
*                                                   *                      *
*                                                   *                      *
*****************************************************************************
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```

Allow you to set the address of the Flash Disk device

Redundancy Control Configuration

Setup for AMIBIOS

```
                                        Chipset
*******************************************************************
* Dual Port 4KB SRAM            [Disabled]     *        Options        *
* SB Serial Port 9              [Disabled]     *                       *
* WatchDog0 Condition           [Disabled]     * Enabled               *
* WatchDog1 Condition           [Disabled]     * Disabled              *
* Invalid OPCODE Condition      [Disabled]     *                       *
* KB/MS System Fail             [Normal]       *                       *
* GPIO PORT0 System Fail        [Normal]       *                       *
* GPIO PORT1 System Fail        [Normal]       *                       *
* GPIO PORT2 System Fail        [Normal]       *                       *
* LPT PORT System Fail          [Normal]       *                       *
* UART1 System Fail             [Normal]       *                       *
* UART2 System Fail             [Normal]       *                       *
* UART3 System Fail             [Normal]       *  *    Select Screen    *
* UART4 System Fail             [Normal]       *  **   Select Item      *
*                                              *  +-   Change Option    *
*                                              * F1    General Help     *
*                                              * F10   Save and Exit    *
*                                              * ESC   Exit             *
*                                              *                       *
*                                              *                       *
*                                              *                       *
*******************************************************************
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```

This option allow you to select the value on bellow devices to guarantee operational safety so that the event of failure on board, the currently-running functions can be transferred to additional board.

1.7 Exit

```
_ Main    Advanced    PCIPnP    Boot    Security    Chipset    Exit
*******************************************************************
* Exit Options                                 * Exit system setup    *
* ********************************************* * after saving the     *
* Save Changes and Exit                        * changes.             *
* Discard Changes and Exit                     *                      *
* Discard Changes                              * F10 key can be used   *
*                                              * for this operation.   *
* Load Optimal Defaults                        *                      *
* Load Failsafe Defaults                       *                      *
*                                              *                      *
*                                              *                      *
*                                              *                      *
*                                              *                      *
*                                              *  *    Select Screen   *
*                                              *  **    Select Item    *
*                                              * Enter Go to Sub Screen *
*                                              * F1    General Help    *
*                                              * F10   Save and Exit   *
*                                              * ESC   Exit            *
*                                              *                      *
*                                              *                      *
*******************************************************************
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```

1.7.1 Save Changes and Exit

As Once you finished the selections, this option will allow you to determine whether to accept the modifications or not. Select the "OK" to save the change and exit, if you select " NO", you will return to Setup utility.

Setup for AMIBIOS

```
_ Main    Advanced   PCIPnP    Boot    Security    Chipset    Exit
******************************************************************************
* Exit Options                                      * Exit system setup    *
* ************************************************** * after saving the     *
* Save Changes and Exit                             * changes.             *
* Discard Changes and Exit                          *                      *
* Discard Changes                                   * F10 key can be used  *
*                                                   * for this operation.  *
* Load Optimal D*********************************************              *
* Load Failsafe *                                   *                       *
*              *                                    *                       *
*              *  Save configuration changes and exit setup?  *            *
*              *                                    *                       *
*              *********************************************              *
*              *                                    *                       *
*              *        [Ok]           [Cancel]     *          ect Screen  *
*              *********************************************  * ** Select Item  *
*                                                   * Enter Go to Sub Screen *
*                                                   * F1    General Help    *
*                                                   * F10   Save and Exit   *
*                                                   * ESC   Exit            *
*                                                   *                       *
*                                                   *                       *
******************************************************************************
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```

1.7.2 Discard Change and Exit

Select this option to exit the Setup without saving any change you have made in this session. Press "OK" will quit the Setup utility without saving any modifications. Press "NO" will return to Setup utility.

```
_ Main    Advanced   PCIPnP    Boot    Security    Chipset    Exit
******************************************************************************
* Exit Options                                      * Exit system setup    *
* ************************************************** * without saving any   *
* Save Changes and Exit                             * changes.             *
* Discard Changes and Exit                          *                      *
* Discard Changes                                   * ESC key can be used  *
*                                                   * for this operation.  *
* Load Optimal Defaul*****************************************              *
* Load Failsafe Defau*                              *                       *
*                    *                              *                       *
*                    * Discard changes and exit setup?  *                  *
*                    *                              *                       *
*                    *****************************************              *
*                    *                              *                       *
*                    *      [Ok]       [Cancel]     *  Select Screen        *
*                    *****************************************  * ** Select Item *
*                                                   * Enter Go to Sub Screen *
*                                                   * F1    General Help    *
*                                                   * F10   Save and Exit   *
*                                                   * ESC   Exit            *
*                                                   *                       *
*                                                   *                       *
******************************************************************************
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```

1.7.3 Discard Change

This option allows you to load the default values to your system configuration. These default settings will save the setup without making any permanent changes to the system configuration.

Discard Changes

This option allows you to discard the selections you made and restore the previously saved value.

Setup for AMIBIOS

```
_  Main     Advanced    PCIPnP     Boot     Security    Chipset    Exit
*************************************************************************
* Exit Options                                          * Discards changes    *
* ***************************************************** * done so far to any of *
* Save Changes and Exit                                 * the setup questions. *
* Discard Changes and Exit                              *                      *
* Discard Changes                                       * F7 key can be used   *
*                                                       * for this operation.  *
* Load Optimal Defaults  ***************************** *                      *
* Load Failsafe Defaults *                            * *                      *
*                        *                            * *                      *
*                        *      Discard Changes?      * *                      *
*                        *                            * *                      *
*                        ***************************** *                      *
*                        *                            * *                      *
*                        *      [Ok]      [Cancel]    * *     Select Screen    *
*                        ***************************** * **    Select Item     *
*                                                       * Enter Go to Sub Screen *
*                                                       * F1    General Help   *
*                                                       * F10   Save and Exit  *
*                                                       * ESC   Exit           *
*                                                       *                      *
*                                                       *                      *
*************************************************************************
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```

1.7.4 Load Optimal Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

```
_  Main     Advanced    PCIPnP     Boot     Security    Chipset    Exit
*************************************************************************
* Exit Options                                          * Load Optimal Default *
* ***************************************************** * values for all the   *
* Save Changes and Exit                                 * setup questions.     *
* Discard Changes and Exit                              *                      *
* Discard Changes                                       * F9 key can be used   *
*                                                       * for this operation.  *
* Load Optimal Defaults  ***************************** *                      *
* Load Failsafe Defaults *                            * *                      *
*                        *                            * *                      *
*                        *    Load Optimal Defaults?  * *                      *
*                        *                            * *                      *
*                        ***************************** *                      *
*                        *                            * *                      *
*                        *      [Ok]      [Cancel]    * *     Select Screen    *
*                        ***************************** * **    Select Item     *
*                                                       * Enter Go to Sub Screen *
*                                                       * F1    General Help   *
*                                                       * F10   Save and Exit  *
*                                                       * ESC   Exit           *
*                                                       *                      *
*                                                       *                      *
*************************************************************************
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```

1.7.5 Load Failsafe Defaults

This option allows you to load the failsafe default values for each of the parameters on the Setup menus, which will provide the most stable performance setting.

```
_ Main    Advanced    PCIPnP    Boot    Security    Chipset    Exit
******************************************************************************
* Exit Options                                      * Load Failsafe Default  *
* *********************************************** * values for all the     *
* Save Changes and Exit                             * setup questions.       *
* Discard Changes and Exit                          *                        *
* Discard Changes                                   * F8 key can be used     *
*                                                   * for this operation.    *
* Load Optimal Defaults ************************* *                        *
* Load Failsafe Defaults *                       * *                        *
*                        * Load Failsafe Defaults? * *                        *
*                        *                       * *                        *
*                        ************************* *                        *
*                        *    [Ok]     [Cancel]  * *                        *
*                        ************************* *    Select Screen       *
*                                                 ** **  Select Item         *
*                                                 * Enter Go to Sub Screen  *
*                                                 * F1    General Help      *
*                                                 * F10   Save and Exit     *
*                                                 * ESC   Exit              *
*                                                 *                        *
*                                                 *                        *
******************************************************************************
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```

Setup for AMIBIOS