BIOS Reference Manual

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Fox

(VL-EPM-19)

Anaconda

(VL-EBX-18)

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Product Release Notes

This document reflects the content of the BIOS Setup program for the EPM-19 and EBX-18 boards.

Board Revision	BIOS Version	Comments
Rev 1.00	1.01	First release of document

Customer Support

If you are unable to solve a problem after reading this manual, visiting the product support page, or searching the KnowledgeBase, contact VersaLogic Technical Support at (503) 747-2261. VersaLogic support engineers are also available via e-mail at Support@VersaLogic.com.

Repair Service

If your product requires service, you must obtain a Returned Material Authorization (RMA) number by calling 503-747-2261. Be ready to provide the following information:

- Your name, the name of your company, your phone number, and e-mail address
- The name of a technician or engineer that can be contacted if any questions arise
- The quantity of items being returned
- The model and serial number (barcode) of each item
- A detailed description of the problem
- Steps you have taken to resolve or recreate the problem
- The return shipping address

Warranty Repair All parts and labor charges are covered, including return shipping charges for UPS Ground delivery to United States addresses.

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Note: Mark the RMA number clearly on the outside of the box before returning.

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Overview 1

The BIOS Setup program is stored in Flash memory contained in the Vortex86DX2 SoC.

To access the BIOS Setup program, press Del during the early boot cycle. The top-level menu bar is shown below.

```
                    BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------
```

Table 1 lists the BIOS Setup program top-level menu bar features.

Table 1: Top-level Menu Bar Features

Menu	Function
Main	Displays processor and memory parameters
Advanced	Configures advanced features, including CPU, IDE, and USB
PCIPnP	Configures PCI and Plug-and-Play (PnP) resources
Boot	Selects boot device options
Chipset	Configures Northbridge and Southbridge resources
Security	Sets passwords and security features
Exit	Saves or discards changes to Setup program options

Table 2 lists the function keys available for menu screens.

Table 2. BIOS Setup Program Function Keys

Key	Function	Key	Function
← or →	Selects a different menu screen (Moves the cursor left or right)	↑ or ↓	Selects an item (Moves the cursor up or down)
+ or -	Changes option/field	Enter	Executes a command or selects a sub-menu
PgDn	Go to next page	PgUp	Go to previous page
Home	Go to top of screen	End	Go to bottom of screen
Tab	Select field	F1	General help
F2 / F3	Change colors	F7	Discard changes
F8	Loads failsafe default values	F9	Loads optimal defaults
F10	Save and exit	Esc	Exit

Main Menu 2

The Main menu enables you to:

- View the processor type and clock frequency
- View RAM size and memory clock frequency
- Set system time and date

Main → System Time

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| System Overview                                      |                       |
| ---------------------------------------------------- |                       |
| AMIBIOS                                              |                       |
| Version   :08.00.16                                  |                       |
| Build Date:06/02/15                                  |                       |
| ID        :1ADSV000                                  |                       |
|                                                      |                       |
| Processor                                            |                       |
| Vortex86DX2 A9125                                    |                       |
| Speed     :933MHz                                    |                       |
|                                                      |                       |
| System Memory                                        |                       |
| Size      :496MB                                     |                       |
| Speed     :333MHz                                    |                       |
|                                                      | ←→  Select Screen     |
| System Time                    [10:57:30]            | ↑↓   Select Item      |
| System Date                    [Fri 11/06/2015]      | +-    Change Field     |
|                                                      | Tab   Select Field     |
|                                                      | F1    General Help     |
|                                                      | F10   Save and Exit    |
|                                                      | ESC   Exit             |
-------------------------------------------------------------------------------
```

Tab to the system time field to change the time.

Main → System Date

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| System Overview                                    |                        |
| -------------------------------------------------- |                        |
| AMIBIOS                                            |                        |
| Version   :08.00.16                                |                        |
| Build Date:06/02/15                                |                        |
| ID        :1ADSV000                                |                        |
|                                                    |                        |
| Processor                                          |                        |
| Vortex86DX2 A9125                                  |                        |
| Speed     :933MHz                                  |                        |
|                                                    |                        |
| System Memory                                      |                        |
| Size      :496MB                                   |                        |
| Speed     :333MHz                                  |                        |
|                                                    | ←→  Select Screen      |
| System Time                    [11:03:45]          | ↑↓   Select Item       |
| System Date                    [Fri 11/06/2015]    | +-    Change Field     |
|                                                    | Tab   Select Field     |
|                                                    | F1    General Help     |
|                                                    | F10   Save and Exit    |
|                                                    | ESC   Exit             |
-------------------------------------------------------------------------------
```

Tab to the system date field to change the date.

Advanced Menu

3

The Advanced menu enables you to do the following:

- Configure CPU parameters
- Configure primary and secondary IDE resources
- Configure USB resources
- Configure ACPI settings
- Configure remote access settings

Top-level view of Advanced menu screen:

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Advanced Settings                                  |                        |
| -------------------------------------------------- |                        |
| WARNING: Setting wrong values in below sections    |                        |
|          may cause system to malfunction.          |                        |
|                                                    |                        |
| » CPU Configuration                                |                        |
| » IDE Configuration                                |                        |
| » USB Configuration                                |                        |
| » ACPI Configuration                               |                        |
| » Remote Access Configuration                      |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    | ←→   Select Screen     |
|                                                    | ↑↓   Select Item       |
|                                                    | Enter Go to Sub Screen |
|                                                    | F1   General Help      |
|                                                    | F10  Save and Exit     |
|                                                    | ESC  Exit              |
|                                                    |                        |
-------------------------------------------------------------------------------
```

Advanced → CPU Configuration → L1 Cache

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| CPU Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Vendor    :DMP                                       | Disabled              |
| Brand     :Vortex86DX2 A9125                         | Enabled               |
| Speed     :933MHz                                    |                       |
| L1 Cache  :32 KB                                     |                       |
| L2 Cache  :256 KB                                    |                       |
| ---------------------------------------------------- |                       |
| L1 Cache                        [Enabled]            |                       |
| L2 Cache                        [Write-Back]         |                       |
| L2 Cache Fetch Line Size        [8 DWORD]            |                       |
| CPU Speed Divide By             [1]                  |                       |
| CPU Fast Decode Cycle           [Fast]               |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option enables or disables the SoC's L1 cache.

Default setting: Enabled

Advanced → CPU Configuration → L2 Cache

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| CPU Configuration                                   |        Options        |
| --------------------------------------------------- |                       |
| Vendor    :DMP                                      | Disabled              |
| Brand     :Vortex86DX2 A9125                        | Write-Thru            |
| Speed     :933MHz                                   | Write-Back            |
| L1 Cache  :32 KB                                    |                       |
| L2 Cache  :256 KB                                   |                       |
| --------------------------------------------------- |                       |
| L1 Cache                      [Enabled]             |                       |
| L2 Cache                      [Write-Back]          |                       |
| L2 Cache Fetch Line Size      [8 DWORD]             |                       |
| CPU Speed Divide By           [1]                   |                       |
| CPU Fast Decode Cycle         [Fast]                |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

This option configures the mode of the SoC's L2 cache.

Default setting: Write-Back

Advanced → CPU Configuration → L2 Cache Fetch Line Size

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| CPU Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Vendor    :DMP                                       | 4 DWORD               |
| Brand     :Vortex86DX2 A9125                         | 8 DWORD               |
| Speed     :933MHz                                    |                       |
| L1 Cache  :32 KB                                     |                       |
| L2 Cache  :256 KB                                    |                       |
| ---------------------------------------------------- |                       |
| L1 Cache                       [Enabled]             |                       |
| L2 Cache                       [Write-Back]          |                       |
| L2 Cache Fetch Line Size       [8 DWORD]             |                       |
| CPU Speed Divide By            [1]                   |                       |
| CPU Fast Decode Cycle          [Fast]                |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option sets the L2 cache's fetch line size.

Default setting: 8 DWORD

Advanced → CPU Configuration → CPU Speed Divide By

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| CPU Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Vendor    :DMP                                       | 1                     |
| Brand     :Vortex86DX2 A9125                         | 2                     |
| Speed     :933MHz                                    | 3                     |
| L1 Cache  :32 KB                                     | 4                     |
| L2 Cache  :256 KB                                    | 5                     |
| ---------------------------------------------------- | 8                     |
| L1 Cache                      [Enabled]              | 16                    |
| L2 Cache                      [Write-Back]           | 32                    |
| L2 Cache Fetch Line Size      [8 DWORD]              |                       |
| CPU Speed Divide By           [1]                    |                       |
| CPU Fast Decode Cycle         [Fast]                 |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option enables you to change the CPU core clock frequency by selecting a “divide by” value. Depending on the model of the board, the default core frequency is 933 MHz or 800 MHz. For example:

- If the CPU core clock frequency is 933 MHz and you select “3”, the resulting frequency will be 311 MHz
- If the CPU cock clock frequency is 800 MHz and you select “16”, the resulting frequency will be 50 MHz

Default setting: 1

Advanced → CPU Configuration → CPU Fast Decode Cycle

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| CPU Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Vendor    :DMP                                       | Normal                |
| Brand     :Vortex86DX2 A9125                         | Fast                  |
| Speed     :933MHz                                    |                       |
| L1 Cache  :32 KB                                     |                       |
| L2 Cache  :256 KB                                    |                       |
| ---------------------------------------------------- |                       |
| L1 Cache                      [Enabled]              |                       |
| L2 Cache                      [Write-Back]           |                       |
| L2 Cache Fetch Line Size      [8 DWORD]              |                       |
| CPU Speed Divide By           [1]                    |                       |
| CPU Fast Decode Cycle         [Fast]                 |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Default setting: Fast

CAUTION:

Do not modify this setting from the default value; unpredictable results could occur.

Advanced → IDE Configuration → OnBoard PCI IDE Controller

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| IDE Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| OnBoard PCI IDE Controller     [Both]                | Disabled              |
|                                                      | Primary               |
| » Primary IDE Master (microSD) [Hard Disk]           | Secondary             |
| » Secondary IDE Master (SATA)  [Hard Disk]           | Both                  |
|                                                      |                       |
| Hard Disk Write Protect        [Disabled]            |                       |
| IDE Detect Time Out (Sec)      [5]                   |                       |
| ATA(PI) 80Pin Cable Detection  [Host & Device]       |                       |
| PCI IDE BusMaster              [Enabled]             |                       |
| IDE Operate Mode               [Legacy Mode]         |                       |
| Hard Disk Delay                [Disabled]            |                       |
| Standard IDE Compatible        [Disabled]            |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option specifies the device(s) used by the on-board PCI IDE controller.

Option	Description
Disabled	Both IDE channels disabled
Primary	Enable only the primary IDE channel
Secondary	Enable only the secondary IDE channel
Both	Enable both IDE channels

Default setting: Both

The Primary IDE Master device is always the microSD card. The Secondary IDE Master device is always the SATA drive.

In the Primary/Second IDE Master menus that follow, a microSD card and SATA hard drive are installed.

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → Type

```
                    BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                   |        Options        |
| ---------------------------------------------------- |                       |
| Device    :Hard Disk                                 | Not Installed         |
| Vendor    :00000 D0 RDC SD-IDE HOST CONTROLLER       | Auto                  |
| Size      :2.0GB                                     | CD/DVD                |
| LBA Mode  :Supported                                 | ARMD                  |
| Block Mode:Not Supported                             |                       |
| PIO Mode  :4                                         |                       |
| Async DMA :MultiWord DMA-2                           |                       |
| Ultra DMA :Ultra DMA-6                               |                       |
| S.M.A.R.T.:Not Supported                             |                       |
| ---------------------------------------------------- |                       |
| Type                            [Auto]               |                       |
| LBA/Large Mode                  [Auto]               |                       |
| Block (Multi-Sector Transfer)   [Auto]               | ←→   Select Screen    |
| PIO Mode                        [Auto]               | ↑↓   Select Item      |
| DMA Mode                        [Auto]               | +-   Change Option    |
| S.M.A.R.T.                      [Auto]               | F1   General Help     |
| 32Bit Data Transfer             [Disabled]           | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Note: This screen is replicated for the Secondary IDE Master device.

When this screen is entered, the primary/secondary IDE device is auto-detected and information about the device is displayed. To change the configuration, select the item and make the desired changes.

Option	Description
Not Installed	Prevents the BIOS from searching for an IDE disk drive on this IDE channel
Auto	Enables auto-detect of the device attached to this IDE channel
CD/DVD	Specifies that an IDE CD-ROM is attached to this IDE channel
ARMD	Specifies an ATAPI Removable Media Device

Default setting: Auto

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → LBA/Large Mode

```
                         BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                   |        Options        |
| ---------------------------------------------------- |                       |
| Device    :Hard Disk                                 | Disabled              |
| Vendor    :00000 D0 RDC SD-IDE HOST CONTROLLER       | Auto                  |
| Size      :2.0GB                                     |                       |
| LBA Mode  :Supported                                 |                       |
| Block Mode:Not Supported                             |                       |
| PIO Mode  :4                                         |                       |
| Async DMA :MultiWord DMA-2                           |                       |
| Ultra DMA :Ultra DMA-6                               |                       |
| S.M.A.R.T.:Not Supported                             |                       |
| ---------------------------------------------------- |                       |
| Type                           [Auto]                |                       |
| LBA/Large Mode                 [Auto]                |                       |
| Block (Multi-Sector Transfer)  [Auto]                | ←→   Select Screen    |
| PIO Mode                       [Auto]                | ↑↓   Select Item      |
| DMA Mode                       [Auto]                | +-   Change Option    |
| S.M.A.R.T.                     [Auto]                | F1   General Help     |
| 32Bit Data Transfer            [Disabled]            | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Note: This screen is replicated for the Secondary IDE Master device.

Option	Description
Disabled	BIOS hard drive access will use the legacy Physical/CHS (Cylinder/Head/Sector) method.
Auto	Allows the BIOS to auto-detect the Large Block Addressing mode control on this device

Default setting: Auto

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → Block (Multi-Sector Transfer)

```
                         BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                   |        Options        |
| ---------------------------------------------------- |                       |
| Device    :Hard Disk                                 | Disabled              |
| Vendor    :00000 D0 RDC SD-IDE HOST CONTROLLER       | Auto                  |
| Size      :2.0GB                                     |                       |
| LBA Mode  :Supported                                 |                       |
| Block Mode:Not Supported                             |                       |
| PIO Mode  :4                                         |                       |
| Async DMA :MultiWord DMA-2                           |                       |
| Ultra DMA :Ultra DMA-6                               |                       |
| S.M.A.R.T.:Not Supported                             |                       |
| ---------------------------------------------------- |                       |
| Type                           [Auto]                |                       |
| LBA/Large Mode                 [Auto]                |                       |
| Block (Multi-Sector Transfer)  [Auto]                | ←→   Select Screen    |
| PIO Mode                       [Auto]                | ↑↓    Select Item      |
| DMA Mode                       [Auto]                | +-    Change Option    |
| S.M.A.R.T.                     [Auto]                | F1    General Help     |
| 32Bit Data Transfer            [Disabled]            | F10   Save and Exit    |
|                                                      | ESC   Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Note: This screen is replicated for the Secondary IDE Master device.

Option	Description
Disabled	Prevents the BIOS from using Multi-sector transfers on the attached device. Data transfers to/from the device will occur one sector at a time.
Auto	Enables use of IDE Block mode if the connected device supports it.

Default setting: Auto

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → PIO Mode

```
                    BIOS SETUP UTILITY (ver 1.01)
         Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                   |        Options        |
| ---------------------------------------------------- |                       |
| Device    :Hard Disk                                 | Auto                  |
| Vendor    :00000 D0 RDC SD-IDE HOST CONTROLLER       | 0                     |
| Size      :2.0GB                                     | 1                     |
| LBA Mode  :Supported                                 | 2                     |
| Block Mode:Not Supported                             | 3                     |
| PIO Mode  :4                                         | 4                     |
| Async DMA :MultiWord DMA-2                           |                       |
| Ultra DMA :Ultra DMA-6                               |                       |
| S.M.A.R.T.:Not Supported                             |                       |
| ---------------------------------------------------- |                       |
| Type                            [Auto]               |                       |
| LBA/Large Mode                  [Auto]               |                       |
| Block (Multi-Sector Transfer)   [Auto]               | ←→   Select Screen    |
| PIO Mode                        [Auto]               | ↑↓   Select Item      |
| DMA Mode                        [Auto]               | +-   Change Option    |
| S.M.A.R.T.                      [Auto]               | F1   General Help     |
| 32Bit Data Transfer             [Disabled]           | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Note: This screen is replicated for the Secondary IDE Master device.

Option	Description
Auto	Allows the BIOS to detect the PIO mode
0	Use PIO mode 0 – data transfer rate is 3.3 Mbytes/second
1	Use PIO mode 1 – data transfer rate is 5.2 Mbytes/second
2	Use PIO mode 2 – data transfer rate is 8.3 Mbytes/second
3	Use PIO mode 3 – data transfer rate is 11.1 Mbytes/second
4	Use PIO mode 4 – data transfer rate is 16.6 Mbytes/second

Default setting: Auto

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → DMA Mode

```
                         BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                    |        Options        |
| ----------------------------------------------------- |                       |
| Device    :Hard Disk        ---    Options     ---   | Auto                  |
| Vendor    :00000 D0 RDC SD-| Auto                |   | SWDMA0                |
| Size      :2.0GB            | SWDMA0              |   | SWDMA1                |
| LBA Mode  :Supported        | SWDMA1              |   | SWDMA2                |
| Block Mode:Not Supported    | SWDMA2              |   | MWDMA0                |
| PIO Mode  :4                | MWDMA0              |   | MWDMA1                |
| Async DMA :MultiWord DMA-2  | MWDMA1              |   | MWDMA2                |
| Ultra DMA :Ultra DMA-6      | MWDMA2              |   | UDMA0                 |
| S.M.A.R.T.:Not Supported    | UDMA0               |   | UDMA1                 |
| ---------------------------| UDMA1               |-- | UDMA2                 |
| Type                        | UDMA2               |   | UDMA3                 |
| LBA/Large Mode              | UDMA3               |   |                       |
| Block (Multi-Sector Transfe| UDMA4               |   | ←→   Select Screen    |
| PIO Mode                    | UDMA5               |   | ↑↓    Select Item      |
| DMA Mode                    | UDMA6               |   | +-    Change Option    |
| S.M.A.R.T.                  ----------------------   | F1    General Help     |
| 32Bit Data Transfer            [Disabled]            | F10   Save and Exit    |
|                                                      | ESC   Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option enables you to select the DMA mode.

Note: This screen is replicated for the Secondary IDE Master device.

```
Default setting:  Auto
```

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → S.M.A.R.T.

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                    |        Options        |
| ----------------------------------------------------- |                       |
| Device    :Hard Disk                                  | Auto                  |
| Vendor    :00000 D0 RDC SD-IDE HOST CONTROLLER        | Disabled              |
| Size      :2.0GB                                      | Enabled               |
| LBA Mode  :Supported                                  |                       |
| Block Mode:Not Supported                              |                       |
| PIO Mode  :4                                          |                       |
| Async DMA :MultiWord DMA-2                            |                       |
| Ultra DMA :Ultra DMA-6                                |                       |
| S.M.A.R.T.:Not Supported                              |                       |
| ----------------------------------------------------- |                       |
| Type                            [Auto]                |                       |
| LBA/Large Mode                  [Auto]                |                       |
| Block (Multi-Sector Transfer)   [Auto]                | ←→   Select Screen    |
| PIO Mode                        [Auto]                | ↑↓   Select Item      |
| DMA Mode                        [Auto]                | +-   Change Option    |
| S.M.A.R.T.                      [Auto]                | F1   General Help     |
| 32Bit Data Transfer             [Disabled]            | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

Smart Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.) enables the BIOS to display a warning message to the user if a S.M.A.R.T. error is detected or drive reliability threshold is exceeded.

Note: This screen is replicated for the Secondary IDE Master device.

Option	Description
Auto	Allows the BIOS to auto-detect device S.M.A.R.T. support
Disabled	Prevents the use of S.M.A.R.T.
Enabled	Enables the use of S.M.A.R.T.

Default setting: Auto

Advanced → IDE Configuration → [Primary/Secondary] IDE Master → 32Bit Data Transfer

```
                         BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Primary IDE Master                                   |        Options        |
| ---------------------------------------------------- |                       |
| Device    :Hard Disk                                 | Disabled              |
| Vendor    :00000 D0 RDC SD-IDE HOST CONTROLLER       | Enabled               |
| Size      :2.0GB                                     |                       |
| LBA Mode  :Supported                                 |                       |
| Block Mode:Not Supported                             |                       |
| PIO Mode  :4                                         |                       |
| Async DMA :MultiWord DMA-2                           |                       |
| Ultra DMA :Ultra DMA-6                               |                       |
| S.M.A.R.T.:Not Supported                             |                       |
| ---------------------------------------------------- |                       |
| Type                           [Auto]                |                       |
| LBA/Large Mode                 [Auto]                |                       |
| Block (Multi-Sector Transfer)  [Auto]                | ←→   Select Screen    |
| PIO Mode                       [Auto]                | ↑↓   Select Item      |
| DMA Mode                       [Auto]                | +-   Change Option    |
| S.M.A.R.T.                     [Auto]                | F1   General Help     |
| 32Bit Data Transfer            [Disabled]            | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Note: This screen is replicated for the Secondary IDE Master device.

Option	Description
Disabled	Prevents the BIOS from using 32-bit data transfers
Enabled	Enables the use of 32-bit data transfers

Default setting: Disabled

Advanced → USB Configuration → USB Host Controller

```
                         BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| USB Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Module Version - 2.24.2-13.4                         | Enabled               |
|                                                      | Disabled              |
| USB Devices Enabled :                                |                       |
|   1 Keyboard, 1 Mouse, 1 Hub                         |                       |
|                                                      |                       |
| USB Host Controller            [Enabled]             |                       |
| Legacy USB Support             [Enabled]             |                       |
| USB 2.0 Controller Mode        [HiSpeed]             |                       |
| BIOS EHCI Hand-Off             [Enabled]             |                       |
| USB Beep Message               [Enabled]             |                       |
| USB Hotplug Flash Drive        [Enabled]             |                       |
|                                                      |                       |
| » USB Mass Storage Device Configuration              | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Enabled	Enables the USB host controller
Disabled	Disables the USB host controller

Default setting: Enabled

Advanced → USB Configuration → Legacy USB Support

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| USB Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Module Version - 2.24.2-13.4                         | Disabled              |
|                                                      | Enabled               |
| USB Devices Enabled :                                | Auto                  |
|   1 Keyboard, 1 Mouse, 1 Hub                         |                       |
|                                                      |                       |
| USB Host Controller            [Enabled]             |                       |
| Legacy USB Support             [Enabled]             |                       |
| USB 2.0 Controller Mode        [HiSpeed]             |                       |
| BIOS EHCI Hand-Off             [Enabled]             |                       |
| USB Beep Message               [Enabled]             |                       |
| USB Hotplug Flash Drive        [Enabled]             |                       |
|                                                      |                       |
| » USB Mass Storage Device Configuration              | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Prevents the use of any USB devices in DOS or during system boot
Enabled	Enables the use of a USB keyboard and USB mass storage devices by the BIOS and by legacy boot loaders and operating systems such as DOS.
Auto	Auto-detects a USB keyboard or USB mouse and, if detected, allows them to be used during boot and while using DOS

Default setting: Enabled

Advanced → USB Configuration → USB 2.0 Controller Mode

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
--------------------------------------------------------------------------------
| USB Configuration                                      |        Options        |
| ------------------------------------------------------ |                       |
| Module Version - 2.24.2-13.4                           | FullSpeed             |
|                                                        | HiSpeed               |
| USB Devices Enabled :                                  |                       |
|   1 Keyboard, 1 Mouse, 1 Hub                           |                       |
|                                                        |                       |
| USB Host Controller            [Enabled]               |                       |
| Legacy USB Support             [Enabled]               |                       |
| USB 2.0 Controller Mode        [HiSpeed]               |                       |
| BIOS EHCI Hand-Off             [Enabled]               |                       |
| USB Beep Message               [Enabled]               |                       |
| USB Hotplug Flash Drive        [Enabled]               |                       |
|                                                        |                       |
| » USB Mass Storage Device Configuration                | ←→   Select Screen    |
|                                                        | ↑↓   Select Item      |
|                                                        | +-   Change Option    |
|                                                        | F1   General Help     |
|                                                        | F10  Save and Exit    |
|                                                        | ESC  Exit             |
|                                                        |                       |
--------------------------------------------------------------------------------
```

Option	Description
FullSpeed	Enables FullSpeed (USB 1.1 / OHCI) mode – 12 Mbits/s
HiSpeed	Enables HiSpeed (USB 2.0 / EHCI) mode – 480 Mbits/s

Default setting: HiSpeed

Advanced → USB Configuration → BIOS EHCI Hand-Off

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| USB Configuration                                    |        Options        |
| ---------------------------------------------------- |                       |
| Module Version - 2.24.2-13.4                         | Disabled              |
|                                                      | Enabled               |
| USB Devices Enabled :                                |                       |
|   1 Keyboard, 1 Mouse, 1 Hub                         |                       |
|                                                      |                       |
| USB Host Controller            [Enabled]             |                       |
| Legacy USB Support             [Enabled]             |                       |
| USB 2.0 Controller Mode        [HiSpeed]             |                       |
| BIOS EHCI Hand-Off             [Enabled]             |                       |
| USB Beep Message               [Enabled]             |                       |
| USB Hotplug Flash Drive        [Enabled]             |                       |
|                                                      |                       |
| » USB Mass Storage Device Configuration              | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Disables EHCI support for operating system without an EHCI hand-off feature
Enabled	Enables EHCI support for operating system without an EHCI hand-off feature

Default setting: Enabled

Advanced → USB Configuration → USB Beep Message

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
--------------------------------------------------------------------------------
| USB Configuration                                      |        Options        |
| ------------------------------------------------------ |                       |
| Module Version - 2.24.2-13.4                           | Disabled              |
|                                                        | Enabled               |
| USB Devices Enabled :                                  |                       |
|   1 Keyboard, 1 Mouse, 1 Hub                           |                       |
|                                                        |                       |
| USB Host Controller            [Enabled]               |                       |
| Legacy USB Support             [Enabled]               |                       |
| USB 2.0 Controller Mode        [HiSpeed]               |                       |
| BIOS EHCI Hand-Off             [Enabled]               |                       |
| USB Beep Message               [Enabled]               |                       |
| USB Hotplug Flash Drive        [Enabled]               |                       |
|                                                        |                       |
| » USB Mass Storage Device Configuration                | ←→   Select Screen    |
|                                                        | ↑↓   Select Item      |
|                                                        | +-   Change Option    |
|                                                        | F1   General Help     |
|                                                        | F10  Save and Exit    |
|                                                        | ESC  Exit             |
|                                                        |                       |
--------------------------------------------------------------------------------
```

Option	Description
Disabled	No beep is made when a USB device is connected
Enabled	A beep is made when a USB device is connected

Default setting: Enabled

Advanced → USB Configuration → USB Hotplug Flash Drive

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
--------------------------------------------------------------------------------
| USB Configuration                                    |        Options         |
| ---------------------------------------------------- |                        |
| Module Version - 2.24.2-13.4                         | Disabled               |
|                                                      | Enabled                |
| USB Devices Enabled :                                |                        |
|   1 Keyboard, 1 Mouse, 1 Hub                         |                        |
|                                                      |                        |
| USB Host Controller            [Enabled]             |                        |
| Legacy USB Support             [Enabled]             |                        |
| USB 2.0 Controller Mode        [HiSpeed]             |                        |
| BIOS EHCI Hand-Off             [Enabled]             |                        |
| USB Beep Message               [Enabled]             |                        |
| USB Hotplug Flash Drive        [Enabled]             |                        |
|                                                      |                        |
| » USB Mass Storage Device Configuration              | ←→   Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
--------------------------------------------------------------------------------
```

This option can be used to place a USB mass storage device in the boot order even when no USB devices are attached.

Default setting: Enabled

Advanced → USB Configuration → USB Mass Storage Device Configuration →USB Mass Storage Reset Delay

```
                    BIOS SETUP UTILITY (ver 1.01)
         Advanced
-------------------------------------------------------------------------------
| USB Mass Storage Device Configuration                |        Options        |
| ---------------------------------------------------- |                       |
| USB Mass Storage Reset Delay   [20 Sec]              | 10 Sec                |
|                                                      | 20 Sec                |
|                                                      | 30 Sec                |
|                                                      | 40 Sec                |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option specifies the length (in seconds) of the device-ready timeout after USB mass storage device reset.

Default setting: 20 Sec

Advanced → ACPI Settings → ACPI Aware O/S

```
                    BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| ACPI Settings                                          |        Options      |
| ------------------------------------------------------ |                     |
| ACPI Aware O/S                  [Yes]                  | No                  |
|                                                        | Yes                 |
| » Advanced ACPI Configuration                          |                     |
|                                                        |                     |
|                                                        |                     |
|                                                        |                     |
|                                                        |                     |
|                                                        |                     |
|                                                        |                     |
|                                                        |                     |
|                                                        | ←→   Select Screen  |
|                                                        | ↑↓   Select Item    |
|                                                        | +-   Change Option  |
|                                                        | F1   General Help   |
|                                                        | F10  Save and Exit  |
|                                                        | ESC  Exit           |
|                                                        |                     |
-------------------------------------------------------------------------------
```

Option	Description
No	ACPI tables are not provided to the operating system
Yes	ACPI tables are provided to the operating system

Default setting: Yes

Advanced → Advanced ACPI Configuration → ACPI Version Features

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Advanced ACPI Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| ACPI Version Features            [ACPI v2.0]         | ACPI v1.0             |
| AMI OEMB table                   [Enabled]           | ACPI v2.0             |
| Headless mode                    [Disabled]          | ACPI v3.0             |
|                                                      | ACPI v4.0             |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option enables you to select which ACPI version is reported in the ACPI tables.

- For Windows 7, ACPI version V3.0 may be used. (Windows 7 requires version 2.0 or later.)
- For Windows XP, ACPI version V1.0 may be used. (Windows XP may function with version 2.0 but has not been extensively tested.)

Refer to your operating system's documentation to make the proper selection.

Default setting: ACPI v2.0

Advanced → Advanced ACPI Configuration → AMI OEMB Table

```
                    BIOS SETUP UTILITY (ver 1.01)
          Advanced
--------------------------------------------------------------------------------
| Advanced ACPI Configuration                          |        Options         |
| ---------------------------------------------------- |                        |
| ACPI Version Features          [ACPI v2.0]           | Disabled               |
| AMI OEMB table                 [Enabled]             | Enabled                |
| Headless mode                  [Disabled]            |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      | ←→   Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
--------------------------------------------------------------------------------
```

The AMI OEMB table passes POST data to the BIOS during ACPI operating system operations.

Option	Description
Disabled	Prevents the ACPI BIOS from adding a pointer to an OEMB table in the Root System Descriptor Table (RSDT)
Enabled	Allows the ACPI BIOS to add a pointer to an OEMB table in the Root System Descriptor Table (RSDT)

Default setting: Enabled

Advanced → Advanced ACPI Configuration → Headless Mode

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
--------------------------------------------------------------------------------
| Advanced ACPI Configuration                          |        Options         |
| ---------------------------------------------------- |                        |
| ACPI Version Features          [ACPI v2.0]           | Disabled               |
| AMI OEMB table                 [Enabled]             | Enabled                |
| Headless mode                  [Disabled]            |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      | ←→   Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
--------------------------------------------------------------------------------
```

This option determines if the BIOS should allow headless operation (that is, operating without a keyboard, monitor, or mouse) by updating the Fixed ACPI Description Table.

Option	Description
Disabled	The BIOS will not update the Fixed ACPI Description Table. Even if the operating system supports headless operation, the operating system will not boot up in headless mode.
Enabled	The BIOS will update the Fixed ACPI Description Table to indicate support for headless operation. Operating systems that support headless operation can proceed to boot in headless mode.

Default setting: Disabled

Advanced → Configure Remote Access → Remote Access

This is the top-level screen of the Remote Access sub-menu. Select “Enabled” to configure remote access settings.

```
                    BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Configure Remote Access type and parameters          |        Options        |
| ---------------------------------------------------- |                       |
| Remote Access                   [Disabled]           | Disabled              |
|                                                      | Enabled               |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Default setting: Disabled

Advanced → Configure Remote Access → Remote Access

```
                        BIOS SETUP UTILITY (ver 1.01)
          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      [Always]            |                        |
| Terminal Type                    [ANSI]              |                        |
| VT-UTF8 Combo Key Support        [Enabled]           |                        |
| Sredir Memory Display Delay      [No Delay]          |                        |
| Terminal Display Mode            [Recorder Mode]     |                        |
|                                                      |                        |
|                                                      | ←→   Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
--------------------------------------------------------------------------------
```

Remote Access enables the user to use a serial port console (in addition to the keyboard/VGA console) to interact with BIOS Setup utility and with some operating systems or boot loaders. The keyboard/VGA console remains active while Remote Access is enabled.

Option	Description
Disabled	Disables remote access capabilities
Enabled	Enables remote access capabilities

Default setting: Enabled

Advanced → Configure Remote Access → Remote Access → Serial Port Number

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Configure Remote Access type and parameters          |        Options        |
| ---------------------------------------------------- |                       |
| Remote Access                  [Enabled]             | COM1                  |
|                                                      | COM2                  |
| Serial port number             [COM1]                | COM4                  |
|      Base Address, IRQ         [3F8h, 4]             | COM5                  |
| Serial Port Mode               [115200 8,n,1]        |                       |
| Flow Control                   [None]                |                       |
| Redirection After BIOS POST    [Always]              |                       |
| Terminal Type                  [ANSI]                |                       |
| VT-UTF8 Combo Key Support      [Enabled]             |                       |
| Sredir Memory Display Delay    [No Delay]            |                       |
| Terminal Display Mode          [Recorder Mode]       |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option specifies the COM port used for remote access.

Default setting: COM1

Advanced → Configure Remote Access → Remote Access → Serial Port Mode

```
                    BIOS SETUP UTILITY (ver 1.01)
          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               [115200 8,n,1]        | 09600 8,n,1           |
| Flow Control                   [None]                |                       |
| Redirection After BIOS POST    [Always]              |                       |
| Terminal Type                  [ANSI]                |                       |
| VT-UTF8 Combo Key Support      [Enabled]             |                       |
| Sredir Memory Display Delay    [No Delay]            |                       |
| Terminal Display Mode          [Recorder Mode]       |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option sets the serial port mode parameters.

Option	Description			
115200 8, n, 1	Baud rate = 115,200	8 data bits	No parity	1 stop bit
57600 8, n, 1	Baud rate = 57,600	8 data bits	No parity	1 stop bit
38400 8, n, 1	Baud rate = 38,400	8 data bits	No parity	1 stop bit
19200 8, n, 1	Baud rate = 19,200	8 data bits	No parity	1 stop bit
9600 8, n, 1	Baud rate = 9,600	8 data bits	No parity	1 stop bit

Default setting: 115200 8,n,1

Advanced → Configure Remote Access → Remote Access → Flow Control

```
                        BIOS SETUP UTILITY (ver 1.01)
          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                   [None]                |                       |
| Redirection After BIOS POST    [Always]              |                       |
| Terminal Type                  [ANSI]                |                       |
| VT-UTF8 Combo Key Support      [Enabled]             |                       |
| Sredir Memory Display Delay    [No Delay]            |                       |
| Terminal Display Mode          [Recorder Mode]       |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
None	No flow control
Hardware	Enables hardware flow control
Software	Enables software flow control

Default setting: None

Advanced → Configure Remote Access → Remote Access →Redirection After BIOS POST

```
                         BIOS SETUP UTILITY (ver 1.01)
          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                   [None]                |                       |
| Redirection After BIOS POST    [Always]              |                       |
| Terminal Type                  [ANSI]                |                       |
| VT-UTF8 Combo Key Support      [Enabled]             |                       |
| Sredir Memory Display Delay    [No Delay]            |                       |
| Terminal Display Mode          [Recorder Mode]       |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Disables redirection after POST
Boot Loader	Sets the redirection to be active during POST and the boot loader
Always	Redirection always enabled after POST

Default setting: Always

Advanced → Configure Remote Access → Remote Access → Terminal Type

```
                    BIOS SETUP UTILITY (ver 1.01)
          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                   [None]                |                       |
| Redirection After BIOS POST    [Always]              |                       |
| Terminal Type                  [ANSI]                |                       |
| VT-UTF8 Combo Key Support      [Enabled]             |                       |
| Sredir Memory Display Delay    [No Delay]            |                       |
| Terminal Display Mode          [Recorder Mode]       |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
ANSI	Extended ASCII character set
VT100	ASCII character set
VT-UTF8	Uses UTF8 encoding to map Unicode characters

Default setting: ANSI

Advanced → Configure Remote Access → Remote Access → VT-UTF8 Combo Key Support

```
                        BIOS SETUP UTILITY (ver 1.01)
          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    [Always]              |                       |
| Terminal Type                  [ANSI]                |                       |
| VT-UTF8 Combo Key Support      [Enabled]             |                       |
| Sredir Memory Display Delay    [No Delay]            |                       |
| Terminal Display Mode          [Recorder Mode]       |                       |
|                                                      |                       |
|                                                      | ←→   Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option enables or disables combination key support for VT-UTF8 terminals. When enabled, function keys are available with the Esc, Fx key sequence. For example, the F10 “Save and Exit” command can be issued by pressing Esc, then 0.

Default setting: Enabled

Advanced → Configure Remote Access → Remote Access → Sredir Memory Display Delay

```
                        BIOS SETUP UTILITY (ver 1.01)
          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                   [None]                |                        |
| Redirection After BIOS POST    [Always]              |                        |
| Terminal Type                  [ANSI]                |                        |
| VT-UTF8 Combo Key Support      [Enabled]             |                        |
| Sredir Memory Display Delay    [No Delay]            |                        |
| Terminal Display Mode          [Recorder Mode]       |                        |
|                                                      |                        |
|                                                      | ←→   Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
-------------------------------------------------------------------------------
```

This option enables you to specify the length of time (in seconds) of the memory display delay.

Default setting: No Delay

Advanced → Configure Remote Access → Remote Access → Terminal Display Mode

```
                        BIOS SETUP UTILITY (ver 1.01)
          Advanced
-------------------------------------------------------------------------------
| Configure Remote Access type and parameters          |        Options         |
| ---------------------------------------------------- |                        |
| Remote Access                  [Enabled]             | Normal Mode            |
|                                                      | Recorder Mode          |
| Serial port number             [COM1]                |                        |
|      Base Address, IRQ         [3F8h, 4]             |                        |
| Serial Port Mode               [115200 8,n,1]        |                        |
| Flow Control                   [None]                |                        |
| Redirection After BIOS POST    [Always]              |                        |
| Terminal Type                  [ANSI]                |                        |
| VT-UTF8 Combo Key Support      [Enabled]             |                        |
| Sredir Memory Display Delay    [No Delay]            |                        |
| Terminal Display Mode          [Recorder Mode]       |                        |
|                                                      |                        |
|                                                      | ←→   Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
-------------------------------------------------------------------------------
```

This option sets the terminal display mode.

Default setting: Recorder Mode

The PCIPnP menu enables you to:

- Clear non-volatile RAM
- Adjust various PCI and Plug-and-Play (PnP) settings
- Assign IRQs
- Assign DMA channels
- Adjust the reserved memory size

PCIPnP → Clear NVRAM

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    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]          |                        |
|                                                    |                        |
| IRQ3                           [Reserved]          |                        |
| IRQ4                           [Reserved]          |                        |
| IRQ5                           [Available]         |                        |
| IRQ6                           [Available]         |                        |
| IRQ7                           [Available]         |                        |
| IRQ9                           [Available]         |                        |
| IRQ10                          [Available]         |                        |
| IRQ11                          [Available]         |                        |
| IRQ12                          [Available]         |                        |
| IRQ14                          [Available]         |                        |
| IRQ15                          [Available]         |                        |
|                                                    |                        |
| DMA Channel 0                  [Available]         |                        |
| DMA Channel 1                  [Available]         | ← →  Select Screen     |
| DMA Channel 3                  [Available]         | ↑↓   Select Item       |
| DMA Channel 5                  [Available]         | +-   Change Option     |
| DMA Channel 6                  [Available]         | F1   General Help      |
| DMA Channel 7                  [Available]         | F10  Save and Exit     |
|                                                    | ESC  Exit              |
| Reserved Memory Size           [Disabled]          |                        |
-------------------------------------------------------------------------------
```

This option enables you to clear Extended System Configuration Data NVRAM used for legacy ISA PnP.

Default setting: No

PCIPnP → Plug & Play O/S

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    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]            |                        |
|                                                      |                        |
| IRQ3                           [Reserved]            |                        |
| IRQ4                           [Reserved]            |                        |
| IRQ5                           [Available]           |                        |
| IRQ6                           [Available]           |                        |
| IRQ7                           [Available]           |                        |
| IRQ9                           [Available]           |                        |
| IRQ10                          [Available]           |                        |
| IRQ11                          [Available]           |                        |
| IRQ12                          [Available]           |                        |
| IRQ14                          [Available]           |                        |
| IRQ15                          [Available]           |                        |
|                                                      |                        |
| DMA Channel 0                  [Available]           |                        |
| DMA Channel 1                  [Available]           | ← →  Select Screen     |
| DMA Channel 3                  [Available]           | ↑↓   Select Item       |
| DMA Channel 5                  [Available]           | +-   Change Option     |
| DMA Channel 6                  [Available]           | F1   General Help      |
| DMA Channel 7                  [Available]           | F10  Save and Exit     |
|                                                      | ESC  Exit              |
| Reserved Memory Size           [Disabled]            |                        |
-------------------------------------------------------------------------------
```

Option	Description
No	Allows the BIOS to configure all devices in the system
Yes	Allows the operating system to configure Legacy Plug & Play devices

Default setting: No

PCIPnP → PCI Latency Timer

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Advanced PCI/PnP Settings                            |        Options         |
| ---------------------------------------------------- |                        |
| WARNING: Setting wrong values in below sections      | 32                     |
|          may cause system to malfunction.            | 64                     |
|                                                      | 96                     |
| Clear NVRAM                    [No]                  | 128                    |
| Plug & Play O/S                [No]                  | 160                    |
| PCI Latency Timer              [64]                  | 192                    |
| Allocate IRQ to PCI VGA        [No]                  | 224                    |
| Palette Snooping               [Disabled]            | 248                    |
|                                                      |                        |
| IRQ3                           [Reserved]            |                        |
| IRQ4                           [Reserved]            |                        |
| IRQ5                           [Available]           |                        |
| IRQ6                           [Available]           |                        |
| IRQ7                           [Available]           |                        |
| IRQ9                           [Available]           |                        |
| IRQ10                          [Available]           |                        |
| IRQ11                          [Available]           |                        |
| IRQ12                          [Available]           |                        |
| IRQ14                          [Available]           |                        |
| IRQ15                          [Available]           |                        |
|                                                      |                        |
| DMA Channel 0                  [Available]           |                        |
| DMA Channel 1                  [Available]           | ← →  Select Screen     |
| DMA Channel 3                  [Available]           | ↑↓   Select Item       |
| DMA Channel 5                  [Available]           | +-   Change Option     |
| DMA Channel 6                  [Available]           | F1   General Help      |
| DMA Channel 7                  [Available]           | F10  Save and Exit     |
|                                                      | ESC  Exit              |
| Reserved Memory Size           [Disabled]            |                        |
```

This option enables you to select to number of PCI clock cycles that a device may control the PCI bus.

Default setting: 64

PCIPnP → Allocate IRQ to PCI VGA

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    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        [No]                  |                        |
| Palette Snooping               [Disabled]            |                        |
|                                                      |                        |
| IRQ3                           [Reserved]            |                        |
| IRQ4                           [Reserved]            |                        |
| IRQ5                           [Available]           |                        |
| IRQ6                           [Available]           |                        |
| IRQ7                           [Available]           |                        |
| IRQ9                           [Available]           |                        |
| IRQ10                          [Available]           |                        |
| IRQ11                          [Available]           |                        |
| IRQ12                          [Available]           |                        |
| IRQ14                          [Available]           |                        |
| IRQ15                          [Available]           |                        |
|                                                      |                        |
| DMA Channel 0                  [Available]           |                        |
| DMA Channel 1                  [Available]           | ← →  Select Screen     |
| DMA Channel 3                  [Available]           | ↑↓   Select Item       |
| DMA Channel 5                  [Available]           | +-   Change Option     |
| DMA Channel 6                  [Available]           | F1   General Help      |
| DMA Channel 7                  [Available]           | F10  Save and Exit     |
|                                                      | ESC  Exit              |
| Reserved Memory Size           [Disabled]            |                        |
```

Option	Description
Yes	Allows allocation of an IRQ to a PCI VGA adapter card
No	Prevents allocation of an IRQ to a PCI VGA adapter card

Default setting: No

PCIPnP → Palette Snooping

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    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        [No]                  |                        |
| Palette Snooping               [Disabled]            |                        |
|                                                      |                        |
| IRQ3                           [Reserved]            |                        |
| IRQ4                           [Reserved]            |                        |
| IRQ5                           [Available]           |                        |
| IRQ6                           [Available]           |                        |
| IRQ7                           [Available]           |                        |
| IRQ9                           [Available]           |                        |
| IRQ10                          [Available]           |                        |
| IRQ11                          [Available]           |                        |
| IRQ12                          [Available]           |                        |
| IRQ14                          [Available]           |                        |
| IRQ15                          [Available]           |                        |
|                                                      |                        |
| DMA Channel 0                  [Available]           |                        |
| DMA Channel 1                  [Available]           | ← →  Select Screen     |
| DMA Channel 3                  [Available]           | ↑↓   Select Item       |
| DMA Channel 5                  [Available]           | +-   Change Option     |
| DMA Channel 6                  [Available]           | F1   General Help      |
| DMA Channel 7                  [Available]           | F10  Save and Exit     |
|                                                      | ESC  Exit              |
| Reserved Memory Size           [Disabled]            |                        |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Palette snooping is disabled
Enabled	Palette snooping is enabled

Default setting: Disabled

PCIPnP → IRQ[3, 4, 5, 6, 7, 9, 10, 11, 12, 14, 15]

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Advanced PCI/PnP Settings                            |        Options         |
| ---------------------------------------------------- |                        |
| WARNING: Setting wrong values in below sections      | Available              |
|          may cause system to malfunction.            | Reserved               |
|                                                      |                        |
| Clear NVRAM                    [No]                  |                        |
| Plug & Play O/S                [No]                  |                        |
| PCI Latency Timer              [64]                  |                        |
| Allocate IRQ to PCI VGA        [No]                  |                        |
| Palette Snooping               [Disabled]            |                        |
|                                                      |                        |
| IRQ3                           [Reserved]            |                        |
| IRQ4                           [Reserved]            |                        |
| IRQ5                           [Available]           |                        |
| IRQ6                           [Available]           |                        |
| IRQ7                           [Available]           |                        |
| IRQ9                           [Available]           |                        |
| IRQ10                          [Available]           |                        |
| IRQ11                          [Available]           |                        |
| IRQ12                          [Available]           |                        |
| IRQ14                          [Available]           |                        |
| IRQ15                          [Available]           |                        |
|                                                      |                        |
| DMA Channel 0                  [Available]           |                        |
| DMA Channel 1                  [Available]           | ← →  Select Screen     |
| DMA Channel 3                  [Available]           | ↑↓   Select Item       |
| DMA Channel 5                  [Available]           | +-   Change Option     |
| DMA Channel 6                  [Available]           | F1   General Help      |
| DMA Channel 7                  [Available]           | F10  Save and Exit     |
|                                                      | ESC  Exit              |
| Reserved Memory Size           [Disabled]            |                        |
-------------------------------------------------------------------------------
```

Notes:

- This screen is replicated for IRQs 4, 5, 6, 7, 9, 10, 11, 12, 14, and 15.
- IRQ3 and IRQ4 are reserved by default. The remaining IRQs are available.

Option	Description
Available	IRQ is available to PCI devices
Reserved	IRQ is reserved for ISA devices

PCIPnP → DMA Channel [0, 1, 3, 5, 6, 7]

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Advanced PCI/PnP Settings                              |        Options        |
| ------------------------------------------------------ |                       |
| WARNING: Setting wrong values in below sections        | Available             |
|          may cause system to malfunction.              | Reserved              |
|                                                        |                       |
| Clear NVRAM                    [No]                    |                       |
| Plug & Play O/S                [No]                    |                       |
| PCI Latency Timer              [64]                    |                       |
| Allocate IRQ to PCI VGA        [No]                    |                       |
| Palette Snooping               [Disabled]              |                       |
|                                                        |                       |
| IRQ3                           [Reserved]              |                       |
| IRQ4                           [Reserved]              |                       |
| IRQ5                           [Available]             |                       |
| IRQ6                           [Available]             |                       |
| IRQ7                           [Available]             |                       |
| IRQ9                           [Available]             |                       |
| IRQ10                          [Available]             |                       |
| IRQ11                          [Available]             |                       |
| IRQ12                          [Available]             |                       |
| IRQ14                          [Available]             |                       |
| IRQ15                          [Available]             |                       |
|                                                        |                       |
| DMA Channel 0                  [Available]             |                       |
| DMA Channel 1                  [Available]             | ← →  Select Screen    |
| DMA Channel 3                  [Available]             | ↑↓   Select Item      |
| DMA Channel 5                  [Available]             | +-   Change Option    |
| DMA Channel 6                  [Available]             | F1   General Help     |
| DMA Channel 7                  [Available]             | F10  Save and Exit    |
|                                                        | ESC  Exit             |
| Reserved Memory Size           [Disabled]              |                       |
-------------------------------------------------------------------------------
```

Notes:

- This screen is replicated for DMA channels 1, 3, 5, 6, and 7
- The default setting for all DMA channels is “Available”.

Option	Description
Available	The DMA channel is available to ISA Plug-and-Play devices
Reserved	The DMA channel cannot be used for ISA Plug-and-Play routing

PCIPnP → Reserved Memory Size

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Advanced PCI/PnP Settings                            |        Options         |
| ---------------------------------------------------- |                        |
| WARNING: Setting wrong values in below sections      | Disabled               |
|          may cause system to malfunction.            | 16k                    |
|                                                      | 32k                    |
| Clear NVRAM                    [No]                  | 64k                    |
| Plug & Play O/S                [No]                  |                        |
| PCI Latency Timer              [64]                  |                        |
| Allocate IRQ to PCI VGA        [No]                  |                        |
| Palette Snooping               [Disabled]            |                        |
|                                                      |                        |
| IRQ3                           [Reserved]            |                        |
| IRQ4                           [Reserved]            |                        |
| IRQ5                           [Available]           |                        |
| IRQ6                           [Available]           |                        |
| IRQ7                           [Available]           |                        |
| IRQ9                           [Available]           |                        |
| IRQ10                          [Available]           |                        |
| IRQ11                          [Available]           |                        |
| IRQ12                          [Available]           |                        |
| IRQ14                          [Available]           |                        |
| IRQ15                          [Available]           |                        |
|                                                      |                        |
| DMA Channel 0                  [Available]           |                        |
| DMA Channel 1                  [Available]           | ← →  Select Screen     |
| DMA Channel 3                  [Available]           | ↑↓   Select Item       |
| DMA Channel 5                  [Available]           | +-   Change Option     |
| DMA Channel 6                  [Available]           | F1   General Help      |
| DMA Channel 7                  [Available]           | F10  Save and Exit     |
|                                                      | ESC  Exit              |
| Reserved Memory Size           [Disabled]            |                        |
-------------------------------------------------------------------------------
```

This option allows you to reserve memory used by ISA devices. When disabled, PCI expansion ROMs are given priority to the 0xD0000-0xDFFFF memory segment.

Option	Description
Disabled	Prevents the BIOS from reserving memory for ISA devices
16k	Reserves 16 Kbytes of system memory for ISA devices
32k	Reserves 32 Kbytes of system memory for ISA devices
64k	Reserves 64 Kbytes of system memory for ISA devices

Default setting: Disabled

5 Boot Menu

The Boot menu enables you to do the following:

- Select the priority of (or disable) connected bootable devices
- Configure multiple boot settings

The top-level screen of the Boot menu is shown below. In this example, three boot devices are connected:

- A microSD card as the 1st boot device
- A SATA hard drive as the 2nd boot device
- A USB thumb drive as the 3rd boot device (when one is connected)

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Boot Settings                                        |                       |
| ---------------------------------------------------- |                       |
| » Boot Settings Configuration                        |                       |
|                                                      |                       |
| 1st [HDD:PM-00000 D0 RDC SD-IDE HOST]                |                       |
| 2nd [SATA:SM-WDC WD3200AAKX-00ERMA0]                 |                       |
| 3rd [USB:Lexar JumpDrive]                            |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | Enter Go to Sub Screen |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
```

Setting Boot Device Priorities

The screen below shows the default boot device priority of the example devices listed on the previous page. To alter the boot device priority, follow these steps:

1. Use the ↓ or ↑ key to highlight a priority level from the list: 1st, 2nd, or 3rd.
2. Press Enter. The highlighted priority level and device are now selected.
3. To select a different device for that priority level, use the ↓ or ↑ key to highlight the desired device. To disable a boot device, choose "Disabled".
4. Press Enter to assign the desired priority of the selected device.
5. When the boot devices are in the desired order, press ← or → to go to another top-level menu, or press F10 to save changes and exit.

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Boot Settings                                        |                       |
| ---------------------------------------------------- |                       |
| » Boot Settings Configuration                        |                       |
|                                                      |                       |
| 1st [HDD:PM-00000 D0 RDC SD-IDE HOST]                |                       |
| 2nd [SATA:SM-WDC WD3200AAKX-00ERMA0]                 |                       |
| 3rd [USB:Lexar JumpDrive]                            |                       |
|                      ---          Options          ---                       |
|                      | HDD:PM-00000 D0 RDC SD-IDE HOST |                       |
|                      | SATA:SM-WDC WD3200AAKX-00ERMA0  |                       |
|                      | USB:Lexar JumpDrive             |                       |
|                      | Disabled                        |                       |
|                      -----------------------------------                      |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Boot → Boot Settings Configuration

This is the top-level screen of the Boot Settings Configuration sub-menu.

```
                        BIOS SETUP UTILITY (ver 1.01)
                                Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                      [Enabled]            | Disabled              |
| Display Mode                    [Graphics]           | Enabled               |
| Quiet Boot                      [Disabled]           |                       |
| AddOn ROM Display Mode          [Keep Current]       |                       |
| Bootup Num-Lock                 [On]                 |                       |
| PS/2 Mouse Support              [Auto]               |                       |
| Beep Function                   [Disabled]           |                       |
| Clear Base Memory               [Enabled]            |                       |
| Virtual Flash Floppy            [Disabled]           |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Boot → Boot Settings Configuration → Quick Boot

```
                        BIOS SETUP UTILITY (ver 1.01)
                                Boot
--------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options         |
| ---------------------------------------------------- |                        |
| Quick Boot                      [Enabled]            | Disabled               |
| Display Mode                    [Graphics]           | Enabled                |
| Quiet Boot                      [Disabled]           |                        |
| AddOn ROM Display Mode          [Keep Current]       |                        |
| Bootup Num-Lock                 [On]                 |                        |
| PS/2 Mouse Support              [Auto]               |                        |
| Beep Function                   [Disabled]           |                        |
| Clear Base Memory               [Enabled]            |                        |
| Virtual Flash Floppy            [Disabled]           |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      | ← →  Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
--------------------------------------------------------------------------------
```

This option allows you to skip certain power-on self-tests while booting.

Option	Description
Disabled	Perform all power-on self-tests. Skip the System Configuration screen with a device summary.
Enabled	Skip certain power-on self-tests for faster boot time

Default setting: Enabled

Boot → Boot Settings Configuration → Display Mode

```
                    BIOS SETUP UTILITY (ver 1.01)
                            Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                      [Enabled]            | Graphics              |
| Display Mode                    [Graphics]           | Text                  |
| Quiet Boot                      [Disabled]           |                       |
| AddOn ROM Display Mode          [Keep Current]       |                       |
| Bootup Num-Lock                 [On]                 |                       |
| PS/2 Mouse Support              [Auto]               |                       |
| Beep Function                   [Disabled]           |                       |
| Clear Base Memory               [Enabled]            |                       |
| Virtual Flash Floppy            [Disabled]           |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Graphics	The sign-on screen and BIOS Setup will use text characters drawn in VGA mode.
Text	The sign-on screen and BIOS Setup will use 80x25 text mode.

Default setting: Graphics

Boot → Boot Settings Configuration → Quiet Boot

```
                        BIOS SETUP UTILITY (ver 1.01)
                                Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                     [Enabled]             | Disabled              |
| Display Mode                   [Graphics]            | Enabled               |
| Quiet Boot                     [Disabled]            |                       |
| AddOn ROM Display Mode         [Keep Current]        |                       |
| Bootup Num-Lock                [On]                  |                       |
| PS/2 Mouse Support             [Auto]                |                       |
| Beep Function                  [Disabled]            |                       |
| Clear Base Memory              [Enabled]             |                       |
| Virtual Flash Floppy           [Disabled]            |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

This option allows boot up screen options to be modified between POST messages or a custom/OEM logo screen.

Option	Description
Disabled	Display all POST messages
Enabled	Do not display all POST messages

Default setting: Graphics

Boot → Boot Settings Configuration → AddOn ROM Display Mode

```
                    BIOS SETUP UTILITY (ver 1.01)
                           Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                    [Enabled]              | Force BIOS            |
| Display Mode                  [Graphics]             | Keep Current          |
| Quiet Boot                    [Disabled]             |                       |
| AddOn ROM Display Mode        [Keep Current]         |                       |
| Bootup Num-Lock               [On]                   |                       |
| PS/2 Mouse Support            [Auto]                 |                       |
| Beep Function                 [Disabled]             |                       |
| Clear Base Memory             [Enabled]              |                       |
| Virtual Flash Floppy          [Disabled]             |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

BIOS extensions (AddOn ROMs) may need to interact with the user by displaying messages or prompts. If the BIOS sign-on screen is in VGA mode, the user may not see these messages. If Display Mode is set to Graphics and a BIOS extension requires text mode, then set AddOn ROM Display Mode to “Force BIOS”.

Option	Description
Force BIOS	Forces text mode for a 3rd party BIOS extension to display during system boot
Keep Current	Do not change the graphics mode during execution of BIOS extensions

Default setting: Keep Current

Boot → Boot Settings Configuration → Bootup Num-Lock

```
                        BIOS SETUP UTILITY (ver 1.01)
                                Boot
--------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options         |
| ---------------------------------------------------- |                        |
| Quick Boot                      [Enabled]            | Off                    |
| Display Mode                    [Graphics]           | On                     |
| Quiet Boot                      [Disabled]           |                        |
| AddOn ROM Display Mode          [Keep Current]       |                        |
| Bootup Num-Lock                 [On]                 |                        |
| PS/2 Mouse Support              [Auto]               |                        |
| Beep Function                   [Disabled]           |                        |
| Clear Base Memory               [Enabled]            |                        |
| Virtual Flash Floppy            [Disabled]           |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      |                        |
|                                                      | ← →  Select Screen     |
|                                                      | ↑↓   Select Item       |
|                                                      | +-   Change Option     |
|                                                      | F1   General Help      |
|                                                      | F10  Save and Exit     |
|                                                      | ESC  Exit              |
|                                                      |                        |
--------------------------------------------------------------------------------
```

Option	Description
Off	The Num Lock key is not automatically enabled during system boot
On	Automatically enables the Num Lock key during system boot

Default setting: On

Boot → Boot Settings Configuration → PS/2 Mouse Support

```
                        BIOS SETUP UTILITY (ver 1.01)
                                Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                     [Enabled]             | Disabled              |
| Display Mode                   [Graphics]            | Enabled               |
| Quiet Boot                     [Disabled]            | Auto                  |
| AddOn ROM Display Mode         [Keep Current]        |                       |
| Bootup Num-Lock                [On]                  |                       |
| PS/2 Mouse Support             [Auto]                |                       |
| Beep Function                  [Disabled]            |                       |
| Clear Base Memory              [Enabled]             |                       |
| Virtual Flash Floppy           [Disabled]            |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Disable PS/2 mouse support
Enabled	Enable PS/2 mouse support
Auto	PS/2 mouse support automatically enabled

Note: This feature is not supported on the EPM-19 board.

Default setting: Auto

Boot → Boot Settings Configuration → Beep Function

```
                    BIOS SETUP UTILITY (ver 1.01)
                            Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                    [Enabled]              | Disabled              |
| Display Mode                  [Graphics]             | Enabled               |
| Quiet Boot                    [Disabled]             |                       |
| AddOn ROM Display Mode        [Keep Current]         |                       |
| Bootup Num-Lock               [On]                   |                       |
| PS/2 Mouse Support            [Auto]                 |                       |
| Beep Function                 [Disabled]             |                       |
| Clear Base Memory             [Enabled]              |                       |
| Virtual Flash Floppy          [Disabled]             |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Do not generate a beep after successful completion of P.O.S.T.
Enabled	Generate a beep after successful completion of P.O.S.T.

Default setting: Disabled

Boot → Boot Settings Configuration → Clear Base Memory

```
                    BIOS SETUP UTILITY (ver 1.01)
                            Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                    [Enabled]              | Disabled              |
| Display Mode                  [Graphics]             | Enabled               |
| Quiet Boot                    [Disabled]             |                       |
| AddOn ROM Display Mode        [Keep Current]         |                       |
| Bootup Num-Lock               [On]                   |                       |
| PS/2 Mouse Support            [Auto]                 |                       |
| Beep Function                 [Disabled]             |                       |
| Clear Base Memory             [Enabled]              |                       |
| Virtual Flash Floppy          [Disabled]             |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Does not clear the first 640 Kbytes of system RAM at boot up
Enabled	Clears the first 640 Kbytes of system RAM at boot up

Default setting: Enabled

Boot → Boot Settings Configuration → Virtual Flash Floppy

```
                        BIOS SETUP UTILITY (ver 1.01)
                                Boot
-------------------------------------------------------------------------------
| Boot Settings Configuration                          |        Options        |
| ---------------------------------------------------- |                       |
| Quick Boot                    [Enabled]              | Disabled              |
| Display Mode                  [Graphics]             | OnBoard               |
| Quiet Boot                    [Disabled]             | OnSoC                 |
| AddOn ROM Display Mode        [Keep Current]         | OnBoard & OnSoC       |
| Bootup Num-Lock               [On]                   |                       |
| PS/2 Mouse Support            [Auto]                 |                       |
| Beep Function                 [Disabled]             |                       |
| Clear Base Memory             [Enabled]              |                       |
| Virtual Flash Floppy          [Disabled]             |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      |                       |
|                                                      | ← →  Select Screen    |
|                                                      | ↑↓   Select Item      |
|                                                      | +-   Change Option    |
|                                                      | F1   General Help     |
|                                                      | F10  Save and Exit    |
|                                                      | ESC  Exit             |
|                                                      |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Disables Virtual Flash Floppy
OnBoard	Not supported
OnSoC	Creates a 1.44 MB bootable Virtual Flash Floppy device using SoC flash memory. This device consumes memory in the 0xD000 segment, and appears in the Boot Menu as a “SCSI Card”.
OnBoard & OnSoC	Not supported

Default setting: Disabled

Chipset Menu

6

The Chipset menu enables you to configure Northbridge and Southbridge resources.

Chipset → Northbridge Configuration

This is the top-level screen of the Northbridge Configuration Sub-menu.

```
                        BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Advanced Chipset Settings                          |                        |
| -------------------------------------------------- |                        |
| WARNING: Setting wrong values in below sections    |                        |
|          may cause system to malfunction.          |                        |
|                                                    |                        |
| » NorthBridge Configuration                        |                        |
| » SouthBridge Configuration                        |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    | ←→   Select Screen     |
|                                                    | ↑↓   Select Item       |
|                                                    | Enter Go to Sub Screen |
|                                                    | F1   General Help      |
|                                                    | F10  Save and Exit     |
|                                                    | ESC  Exit              |
|                                                    |                        |
-------------------------------------------------------------------------------
```

Chipset → Northbridge Configuration → VGA Configuration

This is the top-level screen of the Northbridge Configuration → VGA Configuration sub-menu.

```
                    BIOS SETUP UTILITY (ver 1.01)
                                Chipset
-------------------------------------------------------------------------------
| NorthBridge Chipset Configuration                  |                        |
| -------------------------------------------------- |                        |
| » VGA Configuration                                |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    |                        |
|                                                    | ←→   Select Screen     |
|                                                    | ↑↓   Select Item       |
|                                                    | Enter Go to Sub Screen |
|                                                    | F1    General Help     |
|                                                    | F10   Save and Exit    |
|                                                    | ESC   Exit             |
|                                                    |                        |
-------------------------------------------------------------------------------
```

Chipset → Northbridge Configuration → VGA Configuration → NB VGA

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| VGA Configuration                                   |        Options        |
| --------------------------------------------------- |                       |
| NB VGA                          [Enabled]           | Enabled               |
|   Share Memory                  [16 MB]             | Disabled              |
|   Synchronous Display           [Disabled]          |                       |
|   Boot Display Device           [VBIOS]             |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Disables the on-board video controller
Enabled	Enables the on-board video controller

Default setting: Enabled

Chipset → Northbridge Configuration → VGA Configuration → NB VGA →Share Memory

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| VGA Configuration                                   |        Options        |
| ---------------------------------------------------- |                       |
| NB VGA                        [Enabled]             | Disabled              |
|   Share Memory                [16 MB]               | 8 MB                  |
|   Synchronous Display         [Disabled]            | 16 MB                 |
|   Boot Display Device         [VBIOS]               | 32 MB                 |
|                                                     | 64 MB                 |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------|
```

This option allocates shared memory for the VGA controller. Available system RAM is reduced by this amount.

Default setting: 16 MB

Chipset → Northbridge Configuration → VGA Configuration → NB VGA →Synchronous Display

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| VGA Configuration                                   |        Options        |
| ---------------------------------------------------- |                       |
| NB VGA                        [Enabled]             | Disabled              |
|   Share Memory                [16 MB]               | Enabled               |
|   Synchronous Display         [Disabled]            |                       |
|   Boot Display Device         [VBIOS]               |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

Option	Description
Disabled	Disables simultaneous video output to the LVDS and VGA connectors
Enabled	Enables an LVDS interface to be copied to the VGA interface.

Default setting: Disabled

Chipset → Northbridge Configuration → VGA Configuration → NB VGA →Boot Display Device

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| VGA Configuration                                   |        Options        |
| --------------------------------------------------- |                       |
| NB VGA                        [Enabled]             | VBIOS                 |
|   Share Memory                [16 MB]               | CRT                   |
|   Synchronous Display         [Disabled]            | Panel 0               |
|   Boot Display Device         [VBIOS]               | Panel 1               |
|                                                     | Panel 2               |
|                                                     | Panel 3               |
|                                                     | Panel 4               |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

This option selects the primary video output port.

Option	Video Resolution
VBIOS	Determined by video mode (When VGA connected, 1280x1024 maximum) or set to 800 x 600
CRT	Determined by video mode (1280x1024 maximum)
Panel0	640 x 480
Panel1	800 x 480
Panel2	800 x 600
Panel3	1024 x 600
Panel4	1024 x 768

Default setting: VBIOS

Chipset → Southbridge Configuration →POST Forward to SB COM1

```
                         BIOS SETUP UTILITY (ver 1.01)
                                   Chipset
-------------------------------------------------------------------------------
| South Bridge Chipset Configuration                  |        Options         |
| ---------------------------------------------------- |                        |
| P.O.S.T. Forward to SB COM1    [Disabled]           | Disabled               |
|                                                     | Enabled                |
| » ISA Configuration                                 |                        |
| » Serial Port Configuration                         |                        |
| » WatchDog Configuration                            |                        |
| » LAN Configuration                                 |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | +-   Change Option     |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
```

Option	Description
Disabled	POST information not forwarded to COM1
Enabled	POST codes (in binary format) forwarded to COM1

Default setting: Disabled

Chipset → Southbridge Chipset Configuration →ISA Configuration

This is the top level screen of the ISA Configuration sub-menu.

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| South Bridge Chipset Configuration                  |        Options        |
| ---------------------------------------------------- |                       |
| P.O.S.T. Forward to SB COM1    [Disabled]           |                       |
|                                                     |                       |
| » ISA Configuration                                 |                       |
| » Serial Port Configuration                         |                       |
| » WatchDog Configuration                            |                       |
| » LAN Configuration                                 |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
```

Chipset → Southbridge Chipset Configuration → ISA Configuration → ISA Clock

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| ISA Configuration                                   |        Options        |
| ---------------------------------------------------- |                       |
| ISA Clock                      [8.3 MHz]            | 8.3 MHz               |
| DMA Operating Clock            [4 MHz]              | 16.6 MHz              |
| ISA 16bits I/O wait-state      [1 clock]            |                       |
| ISA 8bits I/O wait-state       [4 clock]            |                       |
| ISA 16bits Memory wait-state   [1 clock]            |                       |
| ISA 8bits Memory wait-state    [4 clock]            |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

This option sets the ISA bus clock rate.

Default setting: 8.3 MHz

Chipset → Southbridge Chipset Configuration → ISA Configuration → DMA Operating Clock

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| ISA Configuration                                   |        Options         |
| ---------------------------------------------------- |                        |
| ISA Clock                      [8.3 MHz]            | 4 MHz                  |
| DMA Operating Clock            [4 MHz]              | 8 MHz                  |
| ISA 16bits I/O wait-state      [1 clock]            |                        |
| ISA 8bits I/O wait-state       [4 clock]            |                        |
| ISA 16bits Memory wait-state   [1 clock]            |                        |
| ISA 8bits Memory wait-state    [4 clock]            |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | +-   Change Option     |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
-------------------------------------------------------------------------------
```

This option sets the DMA operating clock rate.

```
Default setting:  4 MHz
```

Chipset → Southbridge Chipset Configuration → ISA Configuration → ISA 16bits I/O wait-state

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| ISA Configuration                                   |        Options         |
| ---------------------------------------------------- |                        |
| ISA Clock                      [8.3 MHz]            | 1 clock                |
| DMA Operating Clock            [4 MHz]              | 2 clock                |
| ISA 16bits I/O wait-state      [1 clock]            | 3 clock                |
| ISA 8bits I/O wait-state       [4 clock]            | 4 clock                |
| ISA 16bits Memory wait-state   [1 clock]            | 5 clock                |
| ISA 8bits Memory wait-state    [4 clock]            | 6 clock                |
|                                                     | 7 clock                |
|                                                     | 8 clock                |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | +-   Change Option     |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
-------------------------------------------------------------------------------
```

This option selects the number of clock cycles for 16-bit I/O wait states.

Default setting: 1 Clock

Chipset → Southbridge Chipset Configuration → ISA Configuration → ISA 8bits I/O wait-state

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| ISA Configuration                                   |        Options         |
| ---------------------------------------------------- |                        |
| ISA Clock                      [8.3 MHz]            | 1 clock                |
| DMA Operating Clock            [4 MHz]              | 2 clock                |
| ISA 16bits I/O wait-state      [1 clock]            | 3 clock                |
| ISA 8bits I/O wait-state       [4 clock]            | 4 clock                |
| ISA 16bits Memory wait-state   [1 clock]            | 5 clock                |
| ISA 8bits Memory wait-state    [4 clock]            | 6 clock                |
|                                                     | 7 clock                |
|                                                     | 8 clock                |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | +-   Change Option     |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
-------------------------------------------------------------------------------
```

This option selects the number of clock cycles for 8-bit I/O wait states.

Default setting: 4 Clock

Chipset → Southbridge Chipset Configuration → ISA Configuration → ISA 16bits Memory wait-state

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| ISA Configuration                                   |        Options         |
| ---------------------------------------------------- |                        |
| ISA Clock                      [8.3 MHz]            | 0 clock                |
| DMA Operating Clock            [4 MHz]              | 1 clock                |
| ISA 16bits I/O wait-state      [1 clock]            | 2 clock                |
| ISA 8bits I/O wait-state       [4 clock]            | 3 clock                |
| ISA 16bits Memory wait-state   [1 clock]            | 4 clock                |
| ISA 8bits Memory wait-state    [4 clock]            | 5 clock                |
|                                                     | 6 clock                |
|                                                     | 7 clock                |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | +-   Change Option     |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
-------------------------------------------------------------------------------
```

This option selects the number of clock cycles for 16-bit memory wait states.

```
Default setting:  1 Clock
```

Chipset → Southbridge Chipset Configuration → ISA Configuration → ISA 8bits Memory wait-state

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| ISA Configuration                                   |        Options         |
| --------------------------------------------------- |                        |
| ISA Clock                      [8.3 MHz]            | 1 clock                |
| DMA Operating Clock            [4 MHz]              | 2 clock                |
| ISA 16bits I/O wait-state      [1 clock]            | 3 clock                |
| ISA 8bits I/O wait-state       [4 clock]            | 4 clock                |
| ISA 16bits Memory wait-state   [1 clock]            | 5 clock                |
| ISA 8bits Memory wait-state    [4 clock]            | 6 clock                |
|                                                     | 7 clock                |
|                                                     | 8 clock                |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | +-   Change Option     |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
-------------------------------------------------------------------------------
```

This option selects the number of clock cycles for 8-bit memory wait states.

```
Default setting:  4 Clock
```

Chipset → Southbridge Chipset Configuration → Serial Port Configuration → Serial Port [1-4]

```
                    BIOS SETUP UTILITY (ver 1.01)
                                Chipset
-------------------------------------------------------------------------------
| Serial Port Configuration                          |        Options         |
| -------------------------------------------------- |                        |
| Serial Port 1                [3F8]                 | Disabled               |
|   IRQ Select                 [IRQ4]                | 3F8                    |
|   Baud Rate                  [115200 BPS]          | 2F8                    |
| Serial Port 2                [2F8]                 | 3E8                    |
|   IRQ Select                 [IRQ10]               | 2E8                    |
|   Baud Rate                  [115200 BPS]          | 338                    |
| Serial Port 3                [3E8]                 | 238                    |
|   IRQ Select                 [IRQ3]                | 328                    |
|   Baud Rate                  [115200 BPS]          | 228                    |
| Serial Port 4                [2E8]                 | 220                    |
|   IRQ Select                 [IRQ11]               |                        |
|   Baud Rate                  [115200 BPS]          |                        |
|                                                    | ←→   Select Screen     |
|                                                    | ↑↓   Select Item       |
|                                                    | +-   Change Option     |
|                                                    | F1   General Help      |
|                                                    | F10  Save and Exit     |
|                                                    | ESC  Exit              |
|                                                    |                        |
-------------------------------------------------------------------------------
```

This option sets the I/O address for the serial ports.

Note: This screen is replicated for Serial Ports 2, 3, and 4

Default settings:
Serial Port 1 = 3F8
Serial Port 2 = 2F8
Serial Port 3 = 3E8
Serial Port 4 = 238

Chipset → Southbridge Chipset Configuration → Serial Port Configuration → IRQ Select

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| Serial Port Configuration                                |        Options         |
| ---------------------------------------------------------|                        |
| Serial Port 1                [3F8]                       | IRQ3                   |
|   IRQ Select                 [IRQ4]                      | IRQ4                   |
|   Baud Rate                  [115200 BPS]                | IRQ5                   |
| Serial Port 2                [2F8]                       | IRQ6                   |
|   IRQ Select                 [IRQ10]                     | IRQ7                   |
|   Baud Rate                  [115200 BPS]                | IRQ9                   |
| Serial Port 3                [3E8]                       | IRQ10                  |
|   IRQ Select                 [IRQ3]                      | IRQ11                  |
|   Baud Rate                  [115200 BPS]                | IRQ12                  |
| Serial Port 4                [2E8]                       | IRQ14                  |
|   IRQ Select                 [IRQ11]                     | IRQ15                  |
|   Baud Rate                  [115200 BPS]                |                        |
|                                                          | ←→   Select Screen     |
|                                                          | ↑↓   Select Item       |
|                                                          | +-   Change Option     |
|                                                          | F1   General Help      |
|                                                          | F10  Save and Exit     |
|                                                          | ESC  Exit              |
|                                                          |                        |
-------------------------------------------------------------------------------
```

This option sets the IRQs for the serial ports.

Note: This screen is replicated for Serial Ports 2, 3, and 4

Default settings:
Serial Port 1 = IRQ4
Serial Port 2 = IRQ10
Serial Port 3 = IRQ3
Serial Port 4 = IRQ11

Chipset → Southbridge Chipset Configuration → Serial Port Configuration → Baud Rate

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| Serial Port Configuration                          |        Options         |
| ---------------------------------------------------|                        |
| Serial Port 1              [3F8]                   | 2400 BPS               |
|   IRQ Select            ---      Options      ---  | 4800 BPS               |
|   Baud Rate             | 2400 BPS              |  | 9600 BPS               |
| Serial Port 2           | 4800 BPS              |  | 19200 BPS              |
|   IRQ Select            | 9600 BPS              |  | 38400 BPS              |
|   Baud Rate             | 19200 BPS             |  | 57600 BPS              |
| Serial Port 3           | 38400 BPS             |  | 115200 BPS             |
|   IRQ Select            | 57600 BPS             |  | 31200 BPS (Hi Speed)   |
|   Baud Rate             | 115200 BPS            |  | 62400 BPS (Hi Speed)   |
| Serial Port 4           | 31200 BPS (Hi Speed)  |  | 124800 BPS (Hi Speed)  |
|   IRQ Select            | 62400 BPS (Hi Speed)  |  | 249600 BPS (Hi Speed)  |
|   Baud Rate             | 124800 BPS (Hi Speed) |  |                        |
|                         | 249600 BPS (Hi Speed) |  | ←→   Select Screen     |
|                         | 499200 BPS (Hi Speed) |  | ↑↓   Select Item       |
|                         | 748800 BPS (Hi Speed) |  | +-   Change Option     |
|                         -------------------------  | F1   General Help      |
|                                                    | F10  Save and Exit     |
|                                                    | ESC  Exit              |
|                                                    |                        |
-------------------------------------------------------------------------------
```

This option sets the baud rate for the serial ports. The “Hi Speed” modes enable a 13x clock multiplier.

Notes:

This screen is replicated for Serial Ports 2, 3, and 4

The default baud rate for all serial ports is 115200 BPS

Chipset → Southbridge Chipset Configuration →Watchdog Configuration

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| South Bridge Chipset Configuration                  |                       |
| --------------------------------------------------- |                       |
| P.O.S.T. Forward to SB COM1    [Disabled]           |                       |
|                                                     |                       |
| » ISA Configuration                                 |                       |
| » Serial Port Configuration                         |                       |
| » WatchDog Configuration                            |                       |
| » LAN Configuration                                 |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | +-   Change Option    |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

This menu allows the board to detect an application failure.

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Watchdog0 Function

This is the top level screen of the Watchdog Configuration submenu.

```
                        BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| WatchDog Configuration                                |        Options        |
| ----------------------------------------------------- |                       |
| WatchDog0 Function              [Disabled]            | Disabled              |
| WatchDog1 Function              [Disabled]            | Enabled               |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       | ←→   Select Screen    |
|                                                       | ↑↓   Select Item      |
|                                                       | +-   Change Option    |
|                                                       | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Watchdog0 Function

```
                        BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| WatchDog Configuration                                |        Options        |
| ----------------------------------------------------- |                       |
| WatchDog0 Function              [Enabled]             | Disabled              |
|   Signal Select                 [Reset]               | Enabled               |
|   Timer                         [64 Sec]              |                       |
| WatchDog1 Function              [Disabled]            |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       | ←→   Select Screen    |
|                                                       | ↑↓   Select Item      |
|                                                       | +-   Change Option    |
|                                                       | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

This menu enables or disables the Watchdog0 function. Select “Enabled” to configure the Watchdog0 function.

Default setting: Disabled

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Signal Select

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| WatchDog Configuration                                |        Options        |
| ----------------------------------------------------- |                       |
| WatchDog0 Function              [Enabled]             | IRQ3                  |
|   Signal Select              ---    Options     ---   | IRQ4                  |
|   Timer                      | IRQ3               |   | IRQ5                  |
| WatchDog1 Function           | IRQ4               |   | IRQ6                  |
|                              | IRQ5               |   | IRQ7                  |
|                              | IRQ6               |   | IRQ9                  |
|                              | IRQ7               |   | IRQ10                 |
|                              | IRQ9               |   | IRQ11                 |
|                              | IRQ10              |   | IRQ12                 |
|                              | IRQ11              |   | IRQ14                 |
|                              | IRQ12              |   | IRQ15                 |
|                              | IRQ14              |   |                       |
|                              | IRQ15              |   | ←→   Select Screen    |
|                              | NMI                |   | ↑↓   Select Item      |
|                              | Reset              |   | +-   Change Option    |
|                              ----------------------   | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

This menu defines the action to be taken when Watchdog0 has timed out: a selectable IRQ, an NMI, or a reset.

```
Default setting:  Reset
```

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Timer

```
                        BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| WatchDog Configuration                                |        Options        |
| ----------------------------------------------------- |                       |
| WatchDog0 Function              [Enabled]             | 1 Sec                 |
|   Signal Select                 [Reset]               | 2 Sec                 |
|   Timer                         [64 Sec]              | 4 Sec                 |
| WatchDog1 Function              [Disabled]            | 8 Sec                 |
|                                                       | 16 Sec                |
|                                                       | 32 Sec                |
|                                                       | 64 Sec                |
|                                                       | 128 Sec               |
|                                                       | 256 Sec               |
|                                                       | 512 Sec               |
|                                                       |                       |
|                                                       |                       |
|                                                       | ←→   Select Screen    |
|                                                       | ↑↓   Select Item      |
|                                                       | +-   Change Option    |
|                                                       | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

This menu enables you to set the time-out period of the Watchdog0 timer. The watchdog timer is a down counter; if set to 16 seconds, it will count down to 0 and invoke a reset, an NMI, or a specified IRQ. During the countdown period, if the watchdog receives a reset signal, it aborts the countdown and starts a new countdown sequence from the selected value.

The watchdog timer, if enabled, is armed early in BIOS POST, and will remain enabled after booting to an operating system. The timer is disabled after entering the BIOS Setup utility.

CAUTION: If the reset function is combined with a low timeout value, then the board will get stuck in a reboot cycle.

Default setting: 64 Sec

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Watchdog1 Function

```
                        BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
--------------------------------------------------------------------------------
| WatchDog Configuration                                |        Options        |
| ----------------------------------------------------- |                       |
| WatchDog0 Function              [Disabled]            | Disabled              |
| WatchDog1 Function              [Enabled]             | Enabled               |
|   Signal Select                 [Reset]               |                       |
|   Timer                         [64 Sec]              |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       |                       |
|                                                       | ←→   Select Screen    |
|                                                       | ↑↓   Select Item      |
|                                                       | +-   Change Option    |
|                                                       | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
--------------------------------------------------------------------------------
```

This menu enables or disables the Watchdog1 function. Select “Enabled” to configure the Watchdog1 function.

Default setting: Disabled

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Signal Select

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| WatchDog0 Function              [Disabled]            | IRQ3                  |
| WatchDog1 Function          ---    Options     ---    | IRQ4                  |
|   Signal Select             | IRQ3                |    | IRQ5                  |
|   Timer                     | IRQ4                |    | IRQ6                  |
|                             | IRQ5                |    | IRQ7                  |
|                             | IRQ6                |    | IRQ9                  |
|                             | IRQ7                |    | IRQ10                 |
|                             | IRQ9                |    | IRQ11                 |
|                             | IRQ10               |    | IRQ12                 |
|                             | IRQ11               |    | IRQ14                 |
|                             | IRQ12               |    | IRQ15                 |
|                             | IRQ14               |    |                       |
|                             | IRQ15               |    | ←→   Select Screen    |
|                             | NMI                 |    | ↑↓   Select Item      |
|                             | Reset               |    | +-   Change Option    |
|                             ----------------------    | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

This menu defines the action to be taken when Watchdog1 has timed out: a selectable IRQ, an NMI, or a reset.

Default setting: Reset

Chipset → Southbridge Chipset Configuration → Watchdog Configuration → Timer

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| WatchDog Configuration                                |        Options        |
| ----------------------------------------------------- |                       |
| WatchDog0 Function              [Disabled]            | 1 Sec                 |
| WatchDog1 Function              [Enabled]             | 2 Sec                 |
|   Signal Select                 [Reset]               | 4 Sec                 |
|   Timer                         [64 Sec]              | 8 Sec                 |
|                                                       | 16 Sec                |
|                                                       | 32 Sec                |
|                                                       | 64 Sec                |
|                                                       | 128 Sec               |
|                                                       | 256 Sec               |
|                                                       | 512 Sec               |
|                                                       |                       |
|                                                       |                       |
|                                                       | ←→   Select Screen    |
|                                                       | ↑↓   Select Item      |
|                                                       | +-   Change Option    |
|                                                       | F1   General Help     |
|                                                       | F10  Save and Exit    |
|                                                       | ESC  Exit             |
|                                                       |                       |
-------------------------------------------------------------------------------
```

This menu enables you to set the time-out period of the Watchdog1 timer. The watchdog timer is a down counter; if set to 16 seconds, it will count down to 0 and invoke a reset, an NMI, or a specified IRQ. During the countdown period, if the watchdog receives a reset signal, it aborts the countdown and starts a new countdown sequence from the selected value.

Default setting: 64 Sec

Chipset → Southbridge Chipset Configuration →LAN Configuration

```
                        BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| South Bridge Chipset Configuration                  |                        |
| --------------------------------------------------- |                        |
| P.O.S.T. Forward to SB COM1    [Disabled]           |                        |
|                                                     |                        |
| » ISA Configuration                                 |                        |
| » Serial Port Configuration                         |                        |
| » WatchDog Configuration                            |                        |
| » LAN Configuration                                 |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     |                        |
|                                                     | ←→   Select Screen     |
|                                                     | ↑↓   Select Item       |
|                                                     | Enter Go to Sub Screen |
|                                                     | F1   General Help      |
|                                                     | F10  Save and Exit     |
|                                                     | ESC  Exit              |
|                                                     |                        |
-------------------------------------------------------------------------------
```

Chipset → Southbridge Chipset Configuration → LAN Configuration → SB LAN

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| LAN Configuration                                   |        Options        |
| --------------------------------------------------- |                       |
| SB LAN                        [Enabled]             | Enabled               |
| SB MAC Address                [00 04 BF 93 02 1A]   | Disabled              |
| SB LAN Boot                   [Disabled]            |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | Enter Go to Sub Screen |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

This option enables or disables the Southbridge LAN controller (the LAN controller integrated within the Vortex86DX2 SoC). When enabled, the SB MAC address appears. The MAC address cannot be modified using the BIOS Setup utility.

Default setting: Enabled

Chipset → Southbridge Chipset Configuration → LAN Configuration → SB LAN Boot

```
                         BIOS SETUP UTILITY (ver 1.01)
                                     Chipset
-------------------------------------------------------------------------------
| LAN Configuration                                   |        Options        |
| --------------------------------------------------- |                       |
| SB LAN                        [Enabled]             | Disabled              |
| SB MAC Address                [00 04 BF 93 02 1A]   | Used INT 18h          |
| SB LAN Boot                   [Disabled]            | Used INT 19h          |
|                                                     | PnP/BEV(BBS)          |
|                                                     | RPL                   |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→   Select Screen    |
|                                                     | ↑↓   Select Item      |
|                                                     | Enter Go to Sub Screen |
|                                                     | F1   General Help     |
|                                                     | F10  Save and Exit    |
|                                                     | ESC  Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

This menu enables you to select the value of the LAN boot function.

Option	Description
Disabled	Disable network boot
Used INT 18h	Boot the devices ordered in the BIOS Setup program
Used INT 19h	Always boot network first, then local devices
PnP/BEV(BBS)	Boot ordered by BBS BIOS (recommended remote boot setting)
RPL	Use RPL network boot protocol

Default setting: Disabled

Security Menu 7

The Security menu enables you to:

- Set or clear the supervisor password
- Set or clear the user password

Supervisor access allows setting the User Access Level to (No Access, View Only, Limited, or Full Access). To uninstall the Supervisor Password, change it to null (blank).

The User access level is configured by the Supervisor.

Passwords are limited to a maximum of six characters.

Security → Set Supervisor Password

```
                         BIOS SETUP UTILITY (ver 1.01)
    Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Security Settings                                   |                       |
| --------------------------------------------------- |                       |
| Supervisor Password............ Not Installed      |                       |
| User Password.................. Not Installed      |                       |
|                                                     |                       |
| Change Supervisor Password                          |                       |
| Change User Password                                |                       |
|                        ------------------------------                       |
|                        |                            |                       |
|                        | Enter New Password  ______ |                       |
|                        |                            |                       |
|                        ------------------------------                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→  Select Screen     |
|                                                     | ↑↓   Select Item      |
|                                                     | Enter Change          |
|                                                     | F1    General Help    |
|                                                     | F10   Save and Exit   |
|                                                     | ESC   Exit            |
|                                                     |                       |
-------------------------------------------------------------------------------
```

Security → Set User Password

```
                        BIOS SETUP UTILITY (ver 1.01)
    Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Security Settings                                   |                       |
| --------------------------------------------------- |                       |
| Supervisor Password............ Not Installed      |                       |
| User Password................... Not Installed      |                       |
|                                                     |                       |
| Change Supervisor Password                          |                       |
| Change User Password                                |                       |
|                        ------------------------------                       |
|                        |                            |                       |
|                        | Enter New Password  ______ |                       |
|                        |                            |                       |
|                        ------------------------------                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→  Select Screen     |
|                                                     | ↑↓   Select Item      |
|                                                     | Enter Change          |
|                                                     | F1    General Help    |
|                                                     | F10   Save and Exit   |
|                                                     | ESC   Exit            |
|                                                     |                       |
-------------------------------------------------------------------------------
```

.

Exit Menu 8

The Exit menu provides options for:

- Exiting the BIOS program with or without saving changes
- Loading or re-loading default values
- Saving or discarding changes

```
                         BIOS SETUP UTILITY (ver 1.01)
  Main    Advanced    PCIPnP    Boot    Chipset    Security    Exit
-------------------------------------------------------------------------------
| Exit Options                                        |                       |
| ---------------------------------------------------- |                       |
| Save Changes and Exit                               |                       |
| Discard Changes and Exit                            |                       |
| Discard Changes                                     |                       |
|                                                     |                       |
| Load Failsafe Defaults                              |                       |
|                                                     |                       |
| Save Custom Defaults                                |                       |
| Load Custom Defaults                                |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     |                       |
|                                                     | ←→  Select Screen     |
|                                                     | ↑↓   Select Item      |
|                                                     | Enter Go to Sub Screen |
|                                                     | F1    General Help     |
|                                                     | F10   Save and Exit    |
|                                                     | ESC   Exit             |
|                                                     |                       |
-------------------------------------------------------------------------------
```

Option	Keystroke	Description
Save Changes and Exit	F10	Saves changes, exits the BIOS Setup program and begins loading the OS
Discard Changes and Exit	Esc	Exits the BIOS Setup program without saving any changes made in the session
Discard Changes	F7	Discards changes
Load Failsafe Defaults	F9	Loads failsafe values for all settings
Save Custom Defaults	N/A	Enables you to save custom defaults. You can save or restore custom defaults without an installed battery.
Load Custom Defaults	N/A	Loads custom default saved from a previous session.

CAUTION:

If you save custom defaults that prevent entry into the BIOS setup utility, you will not be able to use the CMOS clear jumper to recover the failsafe default settings.