MODEL:

uIBX-200-VX800

**Ultra Compact Embedded System with CompactFlash® Slot
VGA, Gigabit Ethernet, 4 x USB, 802.11b/g Wireless,
Line out, Mic, 2 x RS-232, RoHS Compliant**

Standard SIB

User Manual

Rev. 1.01 – 2009

RoHS Lead Free

Revision

Date	Version	Changes
4 December, 2009	1.01	Added BIOS chapter
27 August, 2009	1.00	Initial release

Copyright

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Chapter

1

Introduction

1.1 Overview

Figure 1-1: uIBX-200-VX800

The uIBX-200-VX800 embedded system is an ultra small PC for installation between a computer screen and its stand. It is powered by the VIA® Eden™ ULV 1 GHz/500 MHz processor, uses the VIA® VX800 system chip and has 1.0 GB or 512 MB of DDR2 memory.

The VIA® VX800 system chip provides many built-in graphics functions allowing high quality video playback without the need for expensive hardware.

The uIBX-200-VX800 is best when combined with the optional CompactFlash® card with Microsoft® Windows XP Embedded or Linux preinstalled. A software development kit and documentation are also available to help easily customize the operating system according to the installation requirements.

1.2 Benefits

Some of the uIBX-200-VX800 benefits include:

- Customizable operating system to suit application needs.
- Less downtime from overheating because there are not fans to fail
- Cost savings with low power consumption
- Easy installation on standard VESA mounting
- Both wired and wireless network connectivity

1.3 Features

The uIBX-200-VX800 features are listed below:

- VIA® Eden™ ULV 1 GHz/500 MHz processor
- 1.0 GB or 512 MB of DDR2
- VGA video output
- One Gigabit Ethernet port
- Four USB 2.0 ports
- Two RS-232 serial ports
- RoHS compliant

1.4 Technical Specifications

The uIBX-200-VX800 technical specifications are listed in Table 1-1.

Specifications	
System	
CPU	VIA® Eden™ ULV 1 GHz/500 MHz processor
Memory	1.0 GB or 512 MB of DDR2 memory
Real-time Clock	Battery backup RTC
Watchdog Timer	Software programmable supports 1~255 sec. system reset
Reset	Reset button
Display	
Video Output	VGA
Video Support	Integrated graphics processor with 2D / 3D / Video controllers 2D and 3D graphics processor Supports MPEG2, WMV9 / VC1 decoding (Standard drivers provide the DirectX Video Acceleration interface to enable video acceleration. User application protocols need to use the DirectX Video Acceleration interface to enable the acceleration features)

Specifications	
I/O and Communications	
Ethernet	1 x 10/100/1000 Mb/s 1 x 802.11b/g (optional)
Serial Ports	2 x RS-232
USB Interfaces	4 x USB 2.0 host connectors
Audio	Line out Microphone in
Power	
Power Supply	5 VDC
Power Consumption	15 W
Environmental and Mechanical	
Operating Temperature	0ºC~50ºC
Humidity	5%RH to 90%RH (non-condensing)
Vibration	Operating Random Vibration Mode (MIL-STD-810F 514.5C-3) 1.Axes: 3 axs (Vertical / Transverse / Longitudinal). 2.10-500 Hz, 60min/axis. 3.Equivalent to Z:2.18 Grms X:1.6 Grms Y:1.96 Grms
Color	Black front, sides and bottom. Light gray top and back
Physical Dimensions	120 mm x 44.4 mm x 125 mm
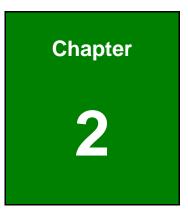
Table 1-1: Technical Specifications

1.5 Certifications

All uIBX-200-VX800 series models comply with the following international standards:

- RoHS
- CE, FCC Class A, CCC

For a more detailed description of these standards, please refer to **Appendix A**.

Chapter

2

Detailed Specifications

2.1 Front Panel

The front panel consists of a small door, giving access to the CompactFlash® card, and also has two USB ports, an audio output and microphone input jack.
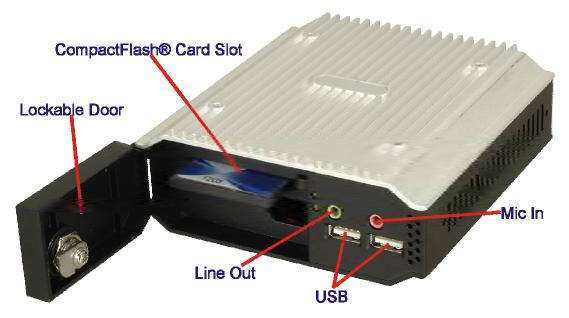
Figure 2-1: Front Panel

Connectors and buttons on the front panel include the following.

- 1 x CompactFlash® slot
- 2 x USB connectors
- 1 x Microphone input
- 1 x Line output

2.2 Rear Connector Panel

All external peripheral interface connectors are located on the bottom panel of the uIBX-200-VX800 . The peripheral interface connectors are shown in Figure 2-2.
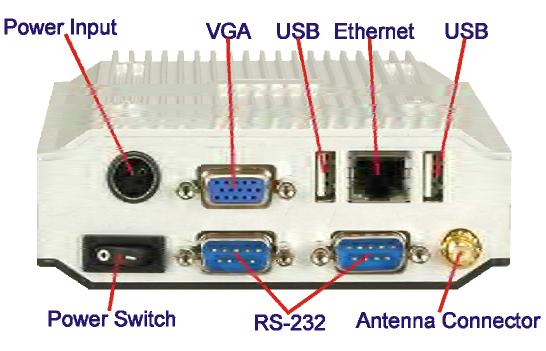
Figure 2-2: uIBX-200-VX800 Peripheral Connectors

Connectors and buttons on the rear panel include the following.

- 1 x 5 V DC power input

- 1 x Power switch

- 1 x VGA output

- 2 x RS-232 ports

- 2 x USB ports

- 1 x Gigabit Ethernet port

- 1 x Antenna connector (certain models only)

2.3 Dimensions

The physical dimensions are shown and listed below:

- Width: 120 mm
- Height: 44.4 mm
- Depth: 125 mm
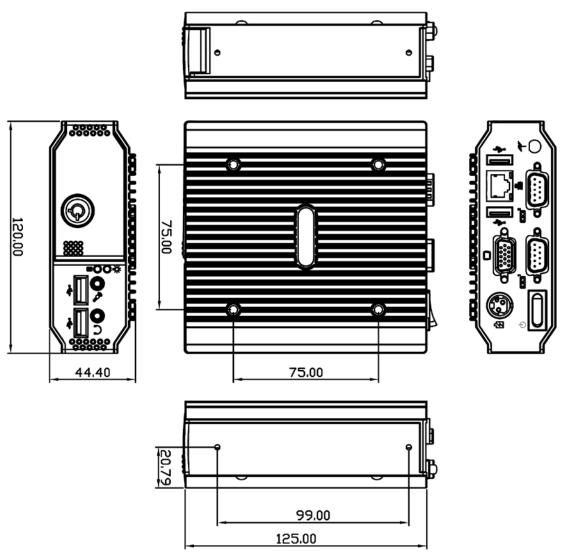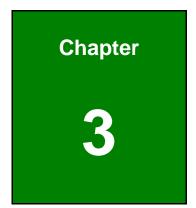
Figure 2-3: Physical Dimensions (millimeters)

2.4 Maintenance

Don't open the uIBX-200-VX800 (except the CompactFlash® door), there are no user-serviceable parts inside.

Chapter

3

Unpacking

3.1 Anti-static Precautions

⚠ **WARNING:**

Failure to take ESD precautions during installation may result in permanent damage to the uIBX-200-VX800 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the uIBX-200-VX800. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the uIBX-200-VX800 or any other electrical component is handled, the following anti-static precautions are strictly adhered to.

- *Wear an anti-static wristband*: Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- *Self-grounding*: Before handling the board touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- *Use an anti-static pad*: When configuring the uIBX-200-VX800, place it on an antic-static pad. This reduces the possibility of ESD damaging the uIBX-200-VX800.

3.2 Unpacking Precautions

When the uIBX-200-VX800 is unpacked, please do the following:

- Follow the anti-static precautions outlined in **Section 3.1**.
- Make sure the packing box is facing upwards so the uIBX-200-VX800 does not fall out of the box.
- Make sure all the components shown in **Section 3.3** are present.

3.3 Unpacking Checklist

 NOTE:

If some of the components listed in the checklist below are missing, please do not proceed with the installation. Contact your sales representative directly. To contact us http://www.emacinc.com/support/

The uIBX-200-VX800 is shipped with the following components:
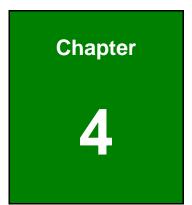
Quantity	Item and Part Number	Image
1	uIBX-200-VX800	
1	Power adapter	
1	Screw set	
1	Quick installation guide	
1	Driver CD	

Table 3-1: Package List Contents

3.4 Optional Items

Quantity	Item	Image
uIBXVK-200B	Double side VESA mount kit for uIBX-200, black	

Table 3-2: Optional Items

Chapter

4

Installation

4.1 Installation Precautions
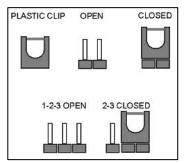
During installation, be aware of the precautions below:

- **Read the user manual**: The user manual provides a complete description of the uIBX-200-VX800, installation instructions and configuration options.
- **DANGER! Disconnect Power**: Power to the uIBX-200-VX800 must be disconnected during the installation process, or before any attempt is made to access the rear panel. Electric shock and personal injury might occur if the rear panel of the uIBX-200-VX800   is opened while the power cord is still connected to an electrical outlet.
- **Qualified Personnel**: The uIBX-200-VX800 must be installed and operated only by trained and qualified personnel. Maintenance, upgrades, or repairs may only be carried out by qualified personnel who are familiar with the associated dangers.
- **Air Circulation**: Make sure there is sufficient air circulation when installing the uIBX-200-VX800. The uIBX-200-VX800's cooling vents must not be obstructed by any objects. Blocking the vents can cause overheating of the uIBX-200-VX800. Leave at least 5 cm of clearance around the uIBX-200-VX800 to prevent overheating.
- **Grounding**: The uIBX-200-VX800 should be properly grounded. The voltage feeds must not be overloaded. Adjust the cabling and provide external overcharge protection per the electrical values indicated on the label attached to the back of the uIBX-200-VX800.

4.2 Jumper Settings

 NOTE:

A jumper is a metal bridge used to close an electrical circuit. It consists of two or three metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To CLOSE/SHORT a jumper means connecting the pins of the jumper with the plastic clip and to OPEN a jumper means removing the plastic clip from a jumper.

The hardware jumpers must be set before installation. Jumpers are shown in Table 4-1.

Description	Label	Type
AT/ATX power select	JP3	2-pin header
CompactFlash® Master/Slave	CF_MS_SEL1	3-pin header
Clear CMOS	J_CMOS	3-pin header

Table 4-1: Jumpers

4.2.1 AT/ATX Power Select Jumper Settings

Jumper Label: **JP3**

Jumper Type: 2-pin header

Jumper Settings: See Table 4-2

The AT Power Select jumper specifies the systems power mode as AT or ATX.

Setting	Description
Open	Use AT power
Closed	Use ATX power

Table 4-2: AT/ATX Power Select Jumper Settings

4.2.2 CompactFlash® Master/Slave Selection

Jumper Label: **CF_MS_SEL1**

Jumper Type: 3-pin header

Jumper Settings: See **Table 4-3**

Set the CompactFlash® card as an IDE master or an IDE slave.

Setting	Description
1-2	Slave
2-3	Master

Table 4-3: CompactFlash® Master/Slave Selection

4.2.3 Clear CMOS Jumper

Jumper Label: **J_CMOS1**

Jumper Type: 3-pin header

Jumper Settings: See Table 4-4

To reset the BIOS, move the jumper to the "Clear BIOS" position for 3 seconds or more, then move back to the default position.

Setting	Description
1-2	Keep current BIOS setup
2-3	Clear BIOS

Table 4-4: Clear BIOS Jumper Settings

4.3 CompactFlash® Card Installation

The uIBX-200-VX800 supports a single CompactFlash® card. To install, follow the steps below.

Step 1: Unlock and open the cover door.

Step 2: Slide the CompactFlash® card into the slot.

Step 3: Close and lock the door.

Figure 4-1: CompactFlash® Card Installation

4.4 External Peripheral Interface Connectors

The uIBX-200-VX800 has the following connectors. Detailed descriptions of the connectors can be found in the subsections below.

- Power input
- VGA
- USB
- Ethernet
- RS-232
- Antenna connector
- Line out
- Mic

Figure 4-2: Peripheral Connectors (Rear)
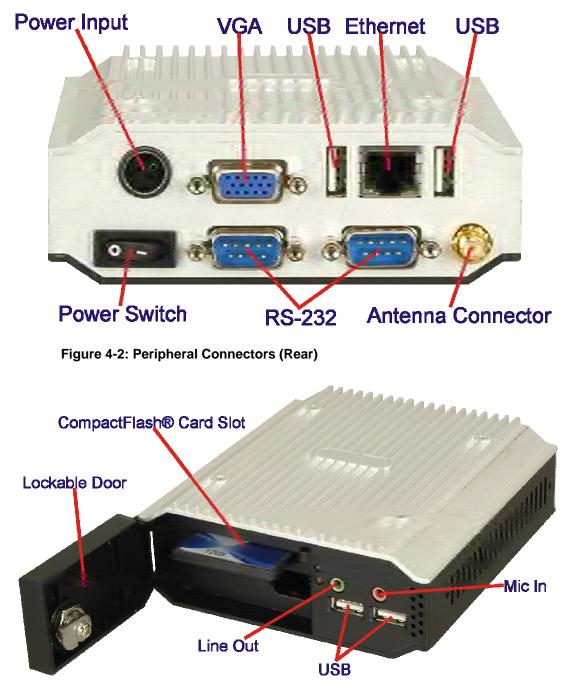
Figure 4–3: Peripheral Connectors (Front)

4.4.1 Power Input

The power terminal block connects to the included 5 V DC power adapter.

CN Label: **Power Input**

CN Type:　　　　 KYCON KPPX-3P

CN Location:　 See Figure 4-2

CN Pinouts:　　 See Figure 4-4

Figure 4-4: Power Terminal Block

4.4.2 Audio Connector

CN Label:　　　　 **Line out, Mic**

CN Type:　　　　 Audio jacks

CN Location:　 See Figure 4–3

The audio jacks connect to external audio devices.

- ▪ **Line Out port (Lime):** Connects to a headphone or a speaker. With multi-channel configurations, this port can also connect to front speakers.
- ▪ **Microphone (Pink):** Connects a microphone.

Figure 4-5: Audio Connector

4.4.3 LAN Connectors

CN Label:　　　　 **LAN**

CN Type:　　　　 RJ-45

CN Location:　 See Figure 4-2

CN Pinouts:　　 See Table 4-5

The LAN connectors allow connection to an external network.

Step 1: **Locate the RJ-45 connectors**. The locations of the USB connectors are shown in **Chapter 4**.

Step 2: **Align the connectors.** Align the RJ-45 connector on the LAN cable with one of the RJ-45 connectors on the uIBX-200-VX800. See Figure 4-6.

Figure 4-6: LAN Connection

Step 3: **Insert the LAN cable RJ-45 connector.** Once aligned, gently insert the LAN cable RJ-45 connector into the on-board RJ-45 connector.

Pin	Description	Pin	Description
1	TXA+	5	TXC-
2	TXA-	6	TXB-
3	TXB+	7	TXD+
4	TXC+	8	TXD-

Table 4-5: LAN Pinouts

Figure 4-7: RJ-45 Ethernet Connector

The RJ-45 Ethernet connector has two status LEDs, one green and one yellow. The green LED indicates activity on the port and the yellow LED indicates the port is linked. See Table 4-6.

STATUS	DESCRIPTION	STATUS	DESCRIPTION
GREEN	Activity	YELLOW	Linked

Table 4-6: RJ-45 Ethernet Connector LEDs

4.4.4 Serial Port Connector

CN Label: **RS-232**

CN Type: DB-9 connectors

CN Location: See Figure 4-2

CN Pinouts: See Table 4-7 and Figure 4-8

RS-232 serial port devices can be attached to the DB-9 ports on the rear panel.

Step 1: **Locate the DB-9 connector**. The location of the DB-9 connector is shown in **Chapter 3**.

Step 2: **Insert the serial connector**. Insert the DB-9 connector of a serial device into the DB-9 connector on the external peripheral interface.

Step 3: **Secure the connector**. Secure the serial device connector to the external interface by tightening the two retention screws on either side of the connector.

Pin	Description	Pin	Description
1	DCD	6	DSR
2	RX	7	RTS
3	TX	8	CTS
4	DTR	9	RI
5	GND		

Table 4-7: Serial Port Pinouts
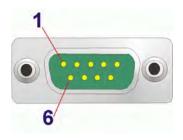
Figure 4-8: Serial Port Pinouts

4.4.5 USB Connector

CN Label: **USB**

CN Type: USB port

CN Location: See Figure 4-2 and Figure 4–3

CN Pinouts: See Table 4-8

The USB ports are for attaching USB peripheral devices to the system.

Step 1: **Located the USB connectors**. The locations of the USB connectors are shown in **Chapter 4**.

Step 2: **Align the connectors.** Align the USB device connector with one of the connectors.

Step 3: **Insert the device connector.** Once aligned, gently insert the USB device connector into the on-board connector.

Pin	Description	Pin	Description
1	USBV3L 5 V	2	GND
3	USBP4N	4	USBP5P
5	USBP4P	6	USBP5N
7	GND	8	USBV3L 5 V

Table 4-8: USB Port Pinouts

4.4.6 VGA Connector

CN Label: **VGA**

CN Type: 15-pin Female

CN Location: See Figure 4-2

CN Pinouts: See Figure 4-10 and Table 4-9

The VGA connector connects to a monitor that accepts VGA video input.

Step 4: **Locate the female DB-15 connector**. The location of the female DB-15 connector is shown in **Chapter 3**.

Step 5: **Align the VGA connector**. Align the male DB-15 connector on the VGA screen cable with the female DB-15 connector on the external peripheral interface.

Insert the VGA connector Once the connectors are properly aligned with the insert the male connector from the VGA screen into the female connector on the uIBX-200-VX800.

Figure 4-9: VGA Connector
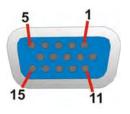
Figure 4-10: VGA Connector

Pin	Description	Pin	Description
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	GND
7	GND	8	GND
9	VCC / NC	10	GND
11	NC	12	DDC DAT
13	HSYNC	14	VSYNC
15	DDCCLK		

Table 4-9: VGA Connector Pinouts

4.5 Mounting the System

To install the uIBX-200-VX800 on the VESA mounting slot, between the monitor stand and the monitor, follow the instructions below.

Step 6: Fasten the attachment onto the VESA mounting on the back of the monitor.
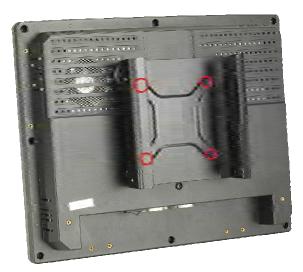
Figure 4–11: Attachment Installation

![NOTE icon] **NOTE:**

It may be easier to perform the next two steps in reverse order, depending on installation conditions.

Step 7: Slide the uIBX-200-VX800 into the attachment and fasten the four screws indicated.

Figure 4–12: System Attachment Screws

Step 8: Attach the monitor and uIBX-200-VX800 to a stand using the VESA mounting holes on the uIBX-200-VX800.

Figure 4–13: Mounting Screws

Three common methods of mounting the uIBX-200-VX800 are listed in the subsections below.

4.6 Software

The uIBX-200-VX800 comes with a pre-installed Windows XPE, CE 6.0 or Linux 2.6.x operating system and a rich software application development kit. For information about configuring the operating system, adding remote management tools or additional software and drivers, refer to the utility CD. The uIBX-200-VX800 includes the following software:

- Standard Windows® CE6.0 professional version license.
- Optional Board Support Package (BSP) for customers to customize their own OS image.
- Attached Software Development Kit (SDK) for embedded Visual C++ to program Windows CE application.
- Built-in .NET Compact Framework support with related SDK
- Thin Client Technology, Microsoft RDP (Remote Desktop Protocol), to enable uIBX-200-VX800 to access Microsoft Windows® based applications installed on Microsoft Terminal Service server.
- Free pre-installed utilities for configuring and diagnosing your uIBX-200-VX800.

uIBX-200-VX800 Embedded System

- Free remote management tools installed in laptop for remotely configuring, monitoring, and managing your uIBX-200-VX800.

Chapter

5

BIOS

5.1 Introduction

The BIOS is programmed onto the BIOS chip. The BIOS setup program allows changes to certain system settings. This chapter outlines the options that can be changed.

5.1.1 Starting Setup

The AMI BIOS is activated when the computer is turned on. The setup program can be activated in one of two ways.

1. Press the **DELETE** key as soon as the system is turned on or
2. Press the **DELETE** key when the "**Press Del to enter SETUP**" message appears on the screen.

If the message disappears before the **DELETE** key is pressed, restart the computer and try again.

5.1.2 Using Setup

Use the arrow keys to highlight items, press **ENTER** to select, use the PageUp and PageDown keys to change entries, press **F1** for help and press **ESC** to quit. Navigation keys are shown in.

Key	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left hand side
Right arrow	Move to the item on the right hand side
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
Page Up key	Increase the numeric value or make changes
Page Dn key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu

Key	Function
F2 /F3 key	Change color from total 16 colors.　F2 to select color forward.
F10 key	Save all the CMOS changes, only for Main Menu

Table 5-1: BIOS Navigation Keys

5.1.3 Getting Help

When **F1** is pressed a small help window describing the appropriate keys to use and the possible selections for the highlighted item appears. To exit the Help Window press **Esc** or the **F1** key again.

5.1.4 Unable to Reboot After Configuration Changes

If the computer cannot boot after changes to the system configuration is made, CMOS defaults. Use the jumper described in Chapter **5**.

5.1.5 BIOS Menu Bar

The **menu bar** on top of the BIOS screen has the following main items:

- Main – Changes the basic system configuration.
- Advanced – Changes the advanced system settings.
- PCIPnP – Changes the advanced PCI/PnP Settings
- Boot – Changes the system boot configuration.
- Security – Sets User and Supervisor Passwords.
- Chipset – Changes the chipset settings.
- Power – Changes power management settings.
- Exit – Selects exit options and loads default settings

The following sections completely describe the configuration options found in the menu items at the top of the BIOS screen and listed above.

5.2 Main

The **Main** BIOS menu (BIOS Menu 1) appears when the **BIOS Setup** program is entered.

The **Main** menu gives an overview of the basic system information.

```
                          BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot    Security   Chipset    Exit

System Overview                                     Use [ENTER], [TAB] or
_____ [SHIFT-TAB] to select a
                                                    field.
AMIBIOS
Version    :08.00.14
Build Date :07/03/09                                Use [+] or [-] to
ID:        :B129MR12                                configure system time.

Processor
VIA® Eden Processor 1000MHz
Speed      :1000MHz
Count      :1
                                                    ←→   Select Screen
System Memory                                       ↑↓   Select Item
Size       :896MB                                   Enter Go to SubScreen
                                                    F1   General Help
System Time             [16:38:10]                  F10  Save and Exit
System Time             [Fri 01/04/2002]            ESC  Exit

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```

BIOS Menu 1: Main

▪ **System Overview**

The **System Overview** lists a brief summary of different system components. The fields in **System Overview** cannot be changed. The items shown in the system overview include:

- ▪ AMI BIOS: Displays auto-detected BIOS information
  - ○ **Version:** Current BIOS version
  - ○ **Build Date:** Date the current BIOS version was made
  - ○ **ID:** Installed BIOS ID
- ▪ Processor: Displays auto-detected CPU specifications
  - ○ **Type:** Names the currently installed processor
  - ○ **Speed:** Lists the processor speed
  - ○ **Count:** The number of CPUs on the motherboard
- ▪ System Memory: Displays the auto-detected system memory.
  - ○ **Size:** Lists memory size

The System Overview field also has two user configurable fields:

- **System Time [xx:xx:xx]**

Use the **System Time** option to set the system time. Manually enter the hours, minutes and seconds.

- **System Date [xx/xx/xx]**

Use the **System Date** option to set the system date. Manually enter the day, month and year.

5.3 Advanced

Use the **Advanced** menu (BIOS Menu 2) to configure the CPU and peripheral devices through the following sub-menus:

WARNING!

Setting the wrong values in the sections below may cause the system to malfunction. Make sure that the settings made are compatible with the hardware.

- CPU Configuration (see **Section 5.3.1**)
- IDE Configuration (see **Section 5.3.2**)
- Super IO Configuration (see **Section 5.3.3**)
- Power Configuration (see **Section □**)
- Remote Access Configuration (see **Section 5.3.5**)
- USB Configuration (see **Section 5.3.6**)

```
                        BIOS SETUP UTILITY
   Main    Advanced   PCIPNP    Boot    Security  Chipset     Exit

 Advanced Settings                            Configure CPU
 _____

 WARNING: Setting wrong values in below sections may cause
 system to malfunction

 > CPU Configuration
 > IDE Configuration
 > SuperIO Configuration                       ←→    Select Screen
 > Hardware Health Configuration               ↑↓    Select Item
 > Power Configuration                         Enter Go to SubScreen
 > Remote Access Configuration                 F1    General Help
 > USB Configuration                           F10   Save and Exit
                                               ESC   Exit

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```

BIOS Menu 2: Advanced

5.3.1 CPU Configuration

Use the **CPU Configuration** menu (BIOS Menu 3) to view detailed CPU specifications and configure the CPU.

```
                        BIOS SETUP UTILITY
   Main    Advanced   PCIPNP    Boot    Security  Chipset     Exit

 Configure advanced CPU settings
 Module Version:3F.15
 _____

 Manufacturer: VIA®
 VIA® Eden Processor 1000MHz
 Frequency: 1.00GHz
 FSB Speed: 400MHz
 Cache L1: 128 KB
 Cache L2: 128 KB                              ←→    Select Screen
 Ratio Actual Value:10                         ↑↓    Select Item
                                               Enter Go to SubScreen
                                               F1    General Help
                                               F10   Save and Exit
                                               ESC   Exit

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```

BIOS Menu 3: CPU Configuration

The CPU Configuration menu (BIOS Menu 3) lists the following CPU details:

- Manufacturer: Lists the name of the CPU manufacturer
- Brand String: Lists the brand name of the CPU being used
- Frequency: Lists the CPU processing speed

- FSB Speed: Lists the FSB speed
- Cache L1: Lists the CPU L1 cache size
- Cache L2: Lists the CPU L2 cache size

5.3.2 IDE Configuration

Use the **IDE Configuration** menu (BIOS Menu 4) to change and/or set the configuration of the IDE devices installed in the system.

```
                        BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot     Security  Chipset      Exit

 IDE Configuration
 _____

 Parallel ATA IDE devices
 > Primary IDE Master            : [Not Detected]
 > Secondary IDE Master          : [Not Detected]
 > Secondary IDE Slave           : [Not Detected]

                                                ←→    Select Screen
                                                ↑↓    Select Item
                                                Enter Go to SubScreen
                                                F1    General Help
                                                F10   Save and Exit
                                                ESC   Exit

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```

BIOS Menu 4: IDE Configuration

- **Parallel ATA IDE devices**

Displays the settings for all the IDE devices. The devices listed below are available.

- Primary IDE Master
- Secondary IDE Master
- Secondary IDE Slave

5.3.2.1 SATA Channel

Sets the IDE configuration of the SATA channels.

```
                        BIOS SETUP UTILITY
   Main     Advanced   PCIPNP     Boot    Security  Chipset     Exit

 Primary IDE Master                                  Select the type of device
 _____   connected to the system
 Device        :Not Detected

 Type                          [Auto]
 LBA/Large Mode                [Auto]
 Block (Multi-Sector Transfer) [Auto]
 PIO Mode                      [Auto]                ←→    Select Screen
 DMA Mode                      [Auto]                ↑ ↓   Select Item
 S.M.A.R.T.                    [Auto]                Enter Go to SubScreen
 32Bit Data Transfer           [Enabled]            F1    General Help
                                                    F10   Save and Exit
                                                    ESC   Exit

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```
BIOS Menu 5: IDE Master and IDE Slave Configuration

▪ **Type [Auto]**

Use the **Type** BIOS option select the type of device the AMIBIOS attempts to boot from after the Power-On Self-Test (POST) is complete.

➔ **Not Installed**
BIOS is prevented from searching for an IDE disk drive on the specified channel.

➔ **Auto** DEFAULT
The BIOS auto detects the IDE disk drive type attached to the specified channel. This setting should be used if an IDE hard disk drive is attached to the specified channel.

➔ **CD/DVD**
The CD/DVD option specifies that an IDE CD-ROM drive is attached to the specified IDE channel. The BIOS does not attempt to search for other types of IDE disk drives on the specified channel.

➔ **ARMD**   This option specifies an ATAPI Removable Media
                                   Device. These include, but are not limited to:

                                   ZIP

                                   LS-120

▪ **LBA/Large Mode [Auto]**

Use the **LBA/Large Mode** option to disable or enable BIOS to auto detects LBA (Logical
Block Addressing). LBA is a method of addressing data on a disk drive. In LBA mode, the
maximum drive capacity is 137 GB.

➔ **Disabled**   BIOS is prevented from using the LBA mode control on
                                   the specified channel.

➔ **Auto**   **DEFAULT**   BIOS auto detects the LBA mode control on the specified
                                   channel.

▪ **Block (Multi Sector Transfer) [Auto]**

Use the **Block (Multi Sector Transfer)** to disable or enable BIOS to auto detect if the
device supports multi-sector transfers.

➔ **Disabled**   BIOS is prevented from using Multi-Sector Transfer on the
                                   specified channel. The data to and from the device occurs
                                   one sector at a time.

➔ **Auto**   **DEFAULT**   BIOS auto detects Multi-Sector Transfer support on the
                                   drive on the specified channel. If supported the data
                                   transfer to and from the device occurs multiple sectors at
                                   a time.

▪ **PIO Mode [Auto]**

Use the **PIO Mode** option to select the IDE PIO (Programmable I/O) mode program timing
cycles between the IDE drive and the programmable IDE controller. As the PIO mode
increases, the cycle time decreases.

➔ **Auto** DEFAULT BIOS auto detects the PIO mode. Use this value if the IDE disk drive support cannot be determined.

➔ **0** PIO mode 0 selected with a maximum transfer rate of 3.3 MB/s

➔ **1** PIO mode 1 selected with a maximum transfer rate of 5.2 MB/s

➔ **2** PIO mode 2 selected with a maximum transfer rate of 8.3 MB/s

➔ **3** PIO mode 3 selected with a maximum transfer rate of 11.1 MB/s

➔ **4** PIO mode 4 selected with a maximum transfer rate of 16.6 MB/s

(This setting generally works with all hard disk drives manufactured after 1999. For other disk drives, such as IDE CD-ROM drives, check the specifications of the drive.)

▪ **DMA Mode [Auto]**

Use the **DMA Mode** BIOS selection to adjust the DMA mode options.

➔ **Auto** DEFAULT BIOS auto detects the DMA mode. Use this value if the IDE disk drive support cannot be determined.

➔ **SWDMA0** Single Word DMA mode 0 selected with a maximum data transfer rate of 2.1 MB/s

➔ **SWDMA1** Single Word DMA mode 1 selected with a maximum data transfer rate of 4.2 MB/s

➔ **SWDMA2** Single Word DMA mode 2 selected with a maximum data transfer rate of 8.3 MB/s

➔ **MWDMA0** Multi Word DMA mode 0 selected with a maximum data transfer rate of 4.2 MB/s

➔ **MWDMA1** Multi Word DMA mode 1 selected with a maximum data transfer rate of 13.3 MB/s

➔ **MWDMA2** Multi Word DMA mode 2 selected with a maximum data transfer rate of 16.6 MB/s

➔ **UDMA0** Ultra DMA mode 0 selected with a maximum data transfer rate of 16.6 MB/s

➔ **UDMA1** Ultra DMA mode 1 selected with a maximum data transfer rate of 25 MB/s

➔ **UDMA2** Ultra DMA mode 2 selected with a maximum data transfer rate of 33.3 MB/s

➔ **UDMA3** Ultra DMA mode 3 selected with a maximum data transfer rate of 44 MB/s (To use this mode, it is required that an 80-conductor ATA cable is used.)

➔ **UDMA4** Ultra DMA mode 4 selected with a maximum data transfer rate of 66.6 MB/s (To use this mode, it is required that an 80-conductor ATA cable is used.)

➔ **UDMA5** Ultra DMA mode 5 selected with a maximum data transfer rate of 99.9 MB/s (To use this mode, it is required that an 80-conductor ATA cable is used.)

▪ **S.M.A.R.T [Auto]**

Use the **S.M.A.R.T** option to auto-detect, disable or enable Self-Monitoring Analysis and Reporting Technology (SMART) on the drive on the specified channel. **S.M.A.R.T** predicts impending drive failures. The **S.M.A.R.T** BIOS option enables or disables this function.

➔ **Auto** DEFAULT BIOS auto detects HDD SMART support.

➔ **Disabled** Prevents BIOS from using the HDD SMART feature.

➔ **Enabled** Allows BIOS to use the HDD SMART feature

▪ **32Bit Data Transfer [Enabled]**

Use the **32Bit Data Transfer** BIOS option to enables or disable 32-bit data transfers.

➔ **Disabled** Prevents the BIOS from using 32-bit data transfers.

➔ **Enabled** DEFAULT Allows BIOS to use 32-bit data transfers on supported hard disk drives.

5.3.3 Super IO Configuration

Use the **Super IO Configuration** menu (BIOS Menu 6) to set or change the configurations for the FDD controllers, parallel ports and serial ports.

```
                         BIOS SETUP UTILITY
   Main     Advanced    PCIPNP      Boot     Security  Chipset      Exit

Configure Super I/O Chipset                        Allows BIOS to select
_____         Serial Port Base
                                                   Addresses
Serial Port1 Address          [3F8]
  Serial Port1 IRQ            [4]
Serial Port2 Address          [2F8]
  Serial Port2 IRQ            [3]

                                                   ←→   Select Screen
                                                   ↑ ↓  Select Item
                                                   Enter Go to SubScreen
                                                   F1   General Help
                                                   F10  Save and Exit
                                                   ESC  Exit

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```

BIOS Menu 6: Super IO Configuration

- **Serial Port1 Address [3F8]**

  Sets the port address of serial port 1.

  - Disabled
  - 3F8   **DEFAULT**
  - 2F8
  - 3E8
  - 2E8

- **Serial Port1 IRQ [4]**

  Sets the interrupt request for serial port 1.

  - 3
  - 4   **DEFAULT**

- **Serial Port2 Address [2F8]**

  Sets the port address of serial port 2.

- Disabled

- 3F8

- 2F8   **DEFAULT**

- 3E8

- 2E8

- **Serial Port2 IRQ [3**

Sets the interrupt request for serial port 2.

- 3   **DEFAULT**

- 4

5.3.4 Power Configuration

The **Power Configuration** menu (**BIOS Menu 7**) configures the power options.

```
                        BIOS SETUP UTILITY
   Main    Advanced    PCIPNP    Boot    Security   Chipset    Power      Exit

 Current Jumper Setting        [ATX]
 > ACPI Configuration
 > APM Configuration


                                                  ←→    Select Screen
                                                  ↑↓    Select Item
                                                  Enter Go to SubScreen
                                                  F1    General Help
                                                  F10   Save and Exit
                                                  ESC   Exit

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```

BIOS Menu 7: Power Configuration

- **Current Jumper Setting [ATX]**

Shows the setting of the Power Selection Jumper.

- ATX   **DEFAULT**

- AT

5.3.4.1 ACPI Configuration

Use the **ACPI Configuration** menu (**BIOS Menu 8**) to select the ACPI state when the system is suspended.

```
                        BIOS SETUP UTILITY
   Main    Advanced   PCIPNP     Boot    Security  Chipset    Power      Exit

General ACPI Configuration
_____

Suspend Mode                       [S1(POS)]


                                              ←→   Select Screen
                                              ↑ ↓  Select Item
                                              Enter Go to SubScreen
                                              F1   General Help
                                              F10  Save and Exit
                                              ESC  Exit

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```

BIOS Menu 8: General ACPI Configuration

▪ **Suspend Mode [S1(POS)]**

Use the **Suspend Mode** option to specify the sleep state the system enters when it is not being used.

➔ **S1 (POS)** DEFAULT Caches are flushed, CPU stops executing instructions, power to CPU and RAM maintained and some peripheral devices powered down

➔ **S3 (STR)** Same as S1, but CPU state is written to RAM, and CPU is powered off

5.3.4.2 APM Configuration

The **APM Configuration** menu (BIOS Menu 9) allows the advanced power management options to be configured.

```
                         BIOS SETUP UTILITY
   Main     Advanced   PCIPNP     Boot    Security  Chipset      Exit

 Restore on AC Power Loss         [Power Off]
 Power Button Mode                [On/Off]

 Resume On Ring                   [Disabled]
 Resume on LAN                    [Disabled]
 Resume on RTC Alarm              [Disabled]

                                                 ←→   Select Screen
                                                 ↑ ↓  Select Item
                                                 Enter Go to SubScreen
                                                 F1    General Help
                                                 F10   Save and Exit
                                                 ESC   Exit

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```

BIOS Menu 9: APM Configuration

▪ **Restore on AC Power Loss [Power Off]**

Use the **Restore on AC Power Loss** BIOS option to specify what state the system returns to if there is a sudden loss of power to the system.

➔ **Power Off**   The system remains turned off

➔ **Power On**   DEFAULT   The system turns on

➔ **Last State**   The system returns to its previous state. If it was on, it turns itself on. If it was off, it remains off.

▪ **Power Button Mode [On/Off]**

Use the **Power Button Mode** BIOS to specify how the power button functions.

➔ **On/Off**   DEFAULT   When the power button is pressed the system is either turned on or off

➔ **Suspend**   When the power button is pressed the system goes into suspend mode

- **Resume on Ring [Disabled]**

  Use the **Resume on Ring** BIOS option to enable activity on the RI (ring in) modem line to rouse the system from a suspend or standby state. That is, the system will be roused by an incoming call on a modem.

  ➔ **Disabled**   DEFAULT   Wake event not generated by an incoming call

  ➔ **Enabled**   Wake event generated by an incoming call

- **Resume on LAN [Disabled]**

  When enabled this option allows the system to be brought out of a sleep state by a special packet sent over the network.

  ➔ **Disabled**   DEFAULT   Won't wake if special packet sent

  ➔ **Enabled**   Will leave sleep state when special packet is sensed on the network

- **Resume on RTC Alarm [Disabled]**

  Use the **Resume on RTC Alarm** option to specify the time the system should be roused from a suspended state.

  ➔ **Disabled**   DEFAULT   The real time clock (RTC) cannot generate a wake event

  ➔ **Enabled**   If selected, the following appears with values that can be selected:

  RTC Alarm Date (Days)

  System Time

  After setting the alarm, the computer turns itself on from a suspend state when the alarm goes off.

5.3.5 Remote Access Configuration

Use the **Remote Access Configuration** menu (BIOS Menu 10) to configure remote access parameters. The **Remote Access Configuration** is an AMIBIOS feature and

allows a remote host running a terminal program to display and configure the BIOS settings.

```
                          BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot    Security  Chipset     Exit

 Configure Remote Access type and parameters
 _____

 Remote Access                 [Disabled]

 Serial port number            [COM1]
     Base Address, IRQ         [3F8H, 4]
 Serial Port Mode              [115200 8,n,1]
 Redirection After BIOS POST   [Always]        ←→   Select Screen
 Terminal Type                 [ANSI]          ↑↓   Select Item
                                               Enter Go to SubScreen
                                               F1    General Help
                                               F10   Save and Exit
                                               ESC   Exit

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```

BIOS Menu 10: Remote Access Configuration

- **Remote Access [Disabled]**

Use the **Remote Access** option to enable or disable access to the remote functionalities of the system.

➔ **Disabled**   DEFAULT   Remote access is disabled.

➔ **Enabled**   Remote access configuration options shown below appear:

    Serial Port Number

    Serial Port Mode

    Flow Control

    Redirection after BIOS POST

    Terminal Type

    VT-UTF8 Combo Key Support

These configuration options are discussed below.

- **Serial Port Number [COM1]**

Use the **Serial Port Number** option allows to select the serial port used for remote access.

➔ **COM1**   DEFAULT   System is remotely accessed through COM1

➔ **COM2**   System is remotely accessed through COM2

NOTE: Make sure the selected COM port is enabled through the Super I/O configuration menu.

▪ **Base Address, IRQ [3F8h,3]**

The **Base Address, IRQ** option cannot be configured and only shows the interrupt address of the serial port listed above.

▪ **Serial Port Mode [115200 8,n,1]**

Use the **Serial Port Mode** option to select baud rate through which the console redirection is made. The following configuration options are available
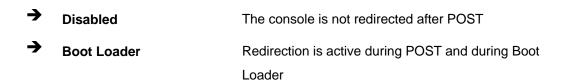
    ▪ 115200 8,n,1   DEFAULT
    ▪ 57600 8,n,1
    ▪ 38400 8,n,1
    ▪ 19200 8,n,1
    ▪ 09600 8,n,1

NOTE:

Identical baud rate setting musts be set on the host (a management computer running a terminal software) and the slave

▪ **Redirection After BIOS POST [Always]**

Use the **Redirection After BIOS POST** option to specify when console redirection should occur.

➔ **Disabled**   The console is not redirected after POST

➔ **Boot Loader**   Redirection is active during POST and during Boot Loader

➔ **Always**   **DEFAULT**   Redirection is always active (Some OSes may not work if set to Always)

- **Terminal Type [ANSI]**

  Use the **Terminal Type** BIOS option to specify the remote terminal type.

  ➔ **ANSI**   **DEFAULT**   The target terminal type is ANSI

  ➔ **VT100**   The target terminal type is VT100

  ➔ **VT-UTF8**   The target terminal type is VT-UTF8

5.3.6 USB Configuration

Use the **USB Configuration** menu (BIOS Menu 11) to read USB configuration information and configure the USB settings.

```
                          BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot    Security  Chipset     Exit

 USB Configuration                                  Enables support for
 ─────────────────────────────────────────────     legacy USB. AUTO
 Module Version – 2.24.3-13.4                       option disables
                                                    legacy support if
 USB Devices Enabled:                               no USB devices are
          None                                      connected

 USB Functions              [Enabled]          ←→   Select Screen
 USB 2.0 Ports Enable       [Enabled]          ↑↓   Select Item
 Legacy USB Support         [Enabled]          Enter Go to SubScreen
 USB 2.0 Controller Mode    [HiSpeed]          F1    General Help
                                               F10   Save and Exit
                                               ESC   Exit

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```

BIOS Menu 11: USB Configuration

- **USB Function [Enabled]**

  When enabled, USB devices can be used in the USB slots.

  - Disabled   **DEFAULT**
  - Enabled

- **USB 2.0 Ports Enabled [Enabled]**

  The USB ports will only operate in the legacy USB 1.1 mode unless this setting is enabled.

  - Disabled   **DEFAULT**
  - Enabled

- **Legacy USB Support [Enabled]**

  Use the **Legacy USB Support** BIOS option to enable USB mouse and USB keyboard support.

  Normally if this option is not enabled, any attached USB mouse or USB keyboard does not become available until a USB compatible operating system is fully booted with all USB drivers loaded. When this option is enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB driver loaded onto the system.

  ➔ **Disabled**   Legacy USB support disabled

  ➔ **Enabled**   **DEFAULT**   Legacy USB support enabled

  ➔ **Auto**   Legacy USB support disabled if no USB devices are connected

- **USB2.0 Controller Mode [HiSpeed]**

  Use the **USB2.0 Controller Mode** option to set the speed of the USB2.0 controller.

  ➔ **FullSpeed**   The controller is capable of operating at 12 Mb/s

  ➔ **HiSpeed**   **DEFAULT**   The controller is capable of operating at 480 Mb/s

5.3.6.1 USB Mass Storage Device Configuration

Use the **USB Mass Storage Device Configuration** menu (BIOS Menu 12) to configure USB mass storage class devices.

```
                        BIOS SETUP UTILITY
   Main    Advanced   PCIPNP     Boot    Security  Chipset     Exit

USB Mass Storage Device Configuration
_____
USB Mass Storage Reset Delay     [20 Sec]

  Device #1            M-SysT5 Dell Memory Key 5.04
  Emulation Type              [Auto]

                                            ←→   Select Screen
                                            ↑ ↓  Select Item
                                            Enter Go to SubScreen
                                            F1   General Help
                                            F10  Save and Exit
                                            ESC  Exit

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```

BIOS Menu 12: USB Mass Storage Device Configuration

▪ **USB Mass Storage Reset Delay [20 Sec]**

Use the **USB Mass Storage Reset Delay** option to set the number of seconds POST waits for the USB mass storage device after the start unit command.

➔ **10 Sec** POST waits 10 seconds for the USB mass storage device after the start unit command.

➔ **20 Sec** DEFAULT POST waits 20 seconds for the USB mass storage device after the start unit command.

➔ **30 Sec** POST waits 30 seconds for the USB mass storage device after the start unit command.

➔ **40 Sec** POST waits 40 seconds for the USB mass storage device after the start unit command.

▪ **Device ##**

The **Device##** field lists the USB devices that are connected to the system.

▪ **Emulation Type [Auto]**

Use the **Emulation Type** BIOS option to specify the type of emulation BIOS has to provide for the USB device.

➔ **Auto** DEFAULT BIOS auto-detects the current USB.

➔ **Floppy** The USB device will be emulated as a floppy drive. The device can be either A: or B: responding to INT13h calls that return DL = 0 or DL = 1 respectively.

➔ **Forced FDD** Allows a hard disk image to be connected as a floppy image. This option works only for drives formatted with FAT12, FAT16 or FAT32.

➔ **Hard Disk** Allows the USB device to be emulated as hard disk responding to INT13h calls that return DL values of 80h or above.

➔ **CDROM** Assumes the CD-ROM is formatted as bootable media. All the devices that support block sizes greater than 512 bytes can only be booted using this option.

5.4 PCI/PnP

Use the **PCI/PnP** menu (BIOS Menu 13) to configure advanced PCI and PnP settings.

⚠ **WARNING!**

Setting wrong values for the BIOS selections in the PCIPnP BIOS menu may cause the system to malfunction.

```
                       BIOS SETUP UTILITY
   Main      Advanced   PCIPNP     Boot    Security  Chipset    Exit

 Advanced PCI/PnP Settings                        Available: Specified
 _____     IRQ is available to be
                                                  used by PCI/PnP
 WARNING: Setting wrong values in below sections  devices.
          may cause system to malfunction         Reserved: Specified
 IRQ3                        [Reserved]           IRQ is reserved for
 IRQ4                        [Reserved]           use by Legacy ISA
 IRQ5                        [Available]          devices.
 IRQ7                        [Available]
 IRQ9                        [Available]
 IRQ10                       [Available]
 IRQ11                       [Available]
 IRQ14                       [Available]
 IRQ15                       [Available]


 DMA Channel 0               [Available]
 DMA Channel 1               [Available]
 DMA Channel 3               [Available]          ←→    Select Screen
 DMA Channel 5               [Available]          ↑ ↓   Select Item
 DMA Channel 6               [Available]          Enter Go to SubScreen
 DMA Channel 7               [Available]          F1    General Help
                                                  F10   Save and Exit
 Reserved Memory Size        [Disabled]           ESC   Exit

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```

BIOS Menu 13: PCI/PnP Configuration

▪ **IRQ# [Available]**

Use the **IRQ#** address to specify what IRQs can be assigned to a particular peripheral device.

➔ **Available**   **DEFAULT**   The specified IRQ is available to be used by PCI/PnP devices

➔ **Reserved**   The specified IRQ is reserved for use by Legacy ISA devices

Available IRQ addresses are:

- ▪ IRQ3
- ▪ IRQ4
- ▪ IRQ5
- ▪ IRQ7
- ▪ IRQ9

▪ IRQ10

▪ IRQ 11

▪ IRQ 14

▪ IRQ 15

▪ **DMA Channel# [Available]**

Use the **DMA Channel#** option to assign a specific DMA channel to a particular PCI/PnP device.

➚ **Available** **DEFAULT**   The specified DMA is available to be used by PCI/PnP devices

➚ **Reserved**   The specified DMA is reserved for use by Legacy ISA devices

Available DMA Channels are:

▪ DM Channel 0

▪ DM Channel 1

▪ DM Channel 3

▪ DM Channel 5

▪ DM Channel 6

▪ DM Channel 7

▪ **Reserved Memory Size [Disabled]**

Use the **Reserved Memory Size** BIOS option to specify the amount of memory that should be reserved for legacy ISA devices.

➚ **Disabled** **DEFAULT**   No memory block reserved for legacy ISA devices

➚ **16K**   16 KB reserved for legacy ISA devices

➚ **32K**   32 KB reserved for legacy ISA devices

➚ **64K**   54 KB reserved for legacy ISA devices

5.5 Boot

Use the **Boot** menu (BIOS Menu 14) to configure system boot options.

```
                         BIOS SETUP UTILITY
   Main     Advanced   PCIPNP     Boot    Security  Chipset     Exit

 Boot Settings                                   Configure settings
 _____        during system boot.

 > Boot Settings Configuration


 > Boot Device Priority
 > Hard Disk Drives
 > CD/DVD Drives
 > Removable Drives                              ←→    Select Screen
                                                 ↑ ↓   Select Item
                                                 Enter Go to SubScreen
                                                 F1    General Help
                                                 F10   Save and Exit
                                                 ESC   Exit

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```

BIOS Menu 14: Boot

5.5.1 Boot Settings Configuration

Use the **Boot Settings Configuration** menu (BIOS Menu 15) to configure advanced system boot options.

```
                         BIOS SETUP UTILITY
   Main     Advanced   PCIPNP     Boot    Security  Chipset     Exit

 Boot Settings Configuration                     Allows BIOS to skip
 _____        certain tests while
                                                 booting. This will
 Quick Boot                 [Enabled]            decrease the time needed
 Quiet Boot                 [Enabled]            to boot the system.
 AddOn ROM Display Mode     [Force BIOS]
 Bootup Num-Lock            [On]
 Boot from LAN Support      [Disabled]
                                                 ←→    Select Screen
                                                 ↑ ↓   Select Item
                                                 Enter Go to SubScreen
                                                 F1    General Help
                                                 F10   Save and Exit
                                                 ESC   Exit

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```

BIOS Menu 15: Boot Settings Configuration

- **Quick Boot [Enabled]**

  Use the **Quick Boot** BIOS option to make the computer speed up the boot process.

  ➔ **Disabled**   No POST procedures are skipped

  ➔ **Enabled**   DEFAULT   Some POST procedures are skipped to decrease the system boot time

- **Quiet Boot [Disabled]**

  Use the **Quiet Boot** BIOS option to select the screen display when the system boots.

  ➔ **Disabled**   DEFAULT   Normal POST messages displayed

  ➔ **Enabled**   OEM Logo displayed instead of POST messages

- **AddOn ROM Display Mode [Force BIOS]**

  Use the **AddOn ROM Display Mode** option to allow add-on ROM (read-only memory) messages to be displayed.

  ➔ **Force BIOS**   DEFAULT   The system forces third party BIOS to display during system boot.

  ➔ **Keep Current**   The system displays normal information during system boot.

- **Bootup Num-Lock [On]**

  Use the **Bootup Num-Lock** BIOS option to specify if the number lock setting must be modified during boot up.

  ➔ **Off**   Does not enable the keyboard Number Lock automatically. To use the 10-keys on the keyboard, press the Number Lock key located on the upper left-hand corner of the 10-key pad. The Number Lock LED on the keyboard lights up when the Number Lock is engaged.

➔ **On** **DEFAULT** Allows the Number Lock on the keyboard to be enabled automatically when the computer system boots up. This allows the immediate use of the 10-key numeric keypad located on the right side of the keyboard. To confirm this, the Number Lock LED light on the keyboard is lit.

▪ **Boot From LAN Support [Disabled]**

Use the **BOOT From LAN Support** option to enable the system to be booted from a remote system.

➔ **Disabled** **DEFAULT** Cannot be booted from a remote system through the LAN

➔ **Enabled** Can be booted from a remote system through the LAN

5.5.2 Boot Device Priority

Use the **Boot Device Priority** menu (BIOS Menu 16) to specify the boot sequence from the available devices. The drive sequence also depends on the boot sequence in the individual device section.

```
                          BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot    Security  Chipset      Exit

 Boot Device Priority                             Specifies the boot
 _____  sequence from the
 > 1st Boot Device            [1st Boot Device]   available devices.
 > 2nd Boot Device            [2nd Boot Device]
 > 3rd Boot Device            [3rd Boot Device]


                                                 ←→   Select Screen
                                                 ↑ ↓  Select Item
                                                 Enter Go to SubScreen
                                                 F1   General Help
                                                 F10  Save and Exit
                                                 ESC  Exit
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```

BIOS Menu 16: Boot Device Priority Settings

5.5.3 Hard Disk Drives

Use the **Hard Disk Drives** menu to specify the boot sequence of the available HDDs. Only installed hard drives are shown.

```
                        BIOS SETUP UTILITY
   Main    Advanced   PCIPNP    Boot    Security  Chipset    Exit

 Hard Disk Drives                                    Specifies the boot
 ──────────────────────────────────────────────     sequence from the
                                                     available devices.
 > 1st Drive                    [Hard Drive 1]
 > 2nd Drive                    [Hard Drive 2]
 > 3rd Drive                    [Hard Drive 3]


                                                     ←→    Select Screen
                                                     ↑ ↓   Select Item
                                                     Enter Go to SubScreen
                                                     F1    General Help
                                                     F10   Save and Exit
                                                     ESC   Exit

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```

BIOS Menu 17: Hard Disk Drives

5.5.4 Removable Drives

Use the **Removable Drives** menu (BIOS Menu 18) to specify the boot sequence of the removable drives. Only connected drives are shown.

```
                        BIOS SETUP UTILITY
   Main    Advanced   PCIPNP    Boot    Security  Chipset    Exit

 Hard Disk Drives                                    Specifies the boot
 ──────────────────────────────────────────────     sequence from the
                                                     available devices.
 > 1st Drive                [Removable Drive 1]
 > 2nd Drive                [Removable Drive 2]
 > 3rd Drive                [Removable Drive 3]


                                                     ←→    Select Screen
                                                     ↑ ↓   Select Item
                                                     Enter Go to SubScreen
                                                     F1    General Help
                                                     F10   Save and Exit
                                                     ESC   Exit

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```

BIOS Menu 18: Removable Drives

5.5.5 CD/DVD Drives

Use the **CD/DVD Drives** menu to specify the boot sequence of the available CD/DVD drives. When the menu is opened, the CD drives and DVD drives connected to the system are listed as shown below:

- 1st Drive   [CD/DVD: PM-(part ID)]
- 2nd Drive   [HDD: PS-(part ID)]
- 3rd Drive   [HDD: SM-(part ID)]
- 4th Drive   [HDD: SM-(part ID)]

NOTE:

Only the drives connected to the system are shown. For example, if only two CDs or DVDs are connected only "**1st Drive**" and "**2nd Drive**" are listed.

The boot sequence from the available devices is selected. If the "**1st Drive**" option is selected a list of available CD/DVD drives is shown. Select the first CD/DVD drive the system boots from. If the "**1st Drive**" is not used for booting this option may be disabled.

```
                           BIOS SETUP UTILITY
   Main      Advanced    PCIPNP     Boot    Security   Chipset     Exit

 Hard Disk Drives                                  Specifies the boot
 _____  sequence from the
 > 1st Drive                      [CD/DVD 1]        available devices.
 > 2nd Drive                      [CD/DVD 2]
 > 3rd Drive                      [CD/DVD 3]


                                                   ←→   Select Screen
                                                   ↑↓   Select Item
                                                   Enter Go to SubScreen
                                                   F1    General Help
                                                   F10   Save and Exit
                                                   ESC   Exit

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```

BIOS Menu 19: CD/DVD Drives

5.6 Security

Use the **Security** menu (BIOS Menu 20) to set system and user passwords.

```
                          BIOS SETUP UTILITY
    Main      Advanced    PCIPNP      Boot    Security  Chipset      Exit

 Security Settings
 _____

 Supervisor Password      :Not Installed
 User Password            :Not Installed

 Change Supervisor Password
 Change User Password
                                          ←→    Select Screen
                                          ↑↓    Select Item
                                          Enter Go to SubScreen
                                          F1    General Help
                                          F10   Save and Exit
                                          ESC   Exit

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```

BIOS Menu 20: Security

- **Change Supervisor Password**

  Use the **Change Supervisor Password** to set or change a supervisor password. The default for this option is **Not Installed**. If a supervisor password must be installed, select this field and enter the password. After the password has been added, **Install** appears next to **Change Supervisor Password**.

- **Change User Password**

  Use the **Change User Password** to set or change a user password. The default for this option is **Not Installed**. If a user password must be installed, select this field and enter the password. After the password has been added, **Install** appears next to **Change User Password**.

5.7 Chipset

Use the **Chipset** menu (BIOS Menu 21) to access the Northbridge and Southbridge configuration menus
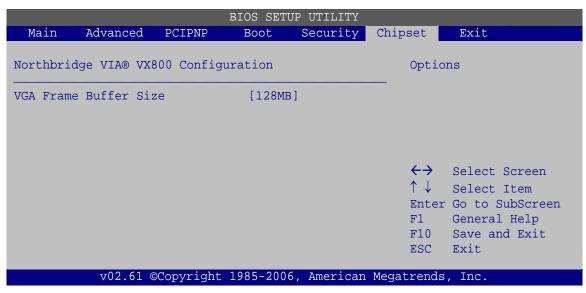
⚠️ **WARNING!**

> Setting the wrong values for the Chipset BIOS selections in the Chipset
> BIOS menu may cause the system to malfunction.

```
                         BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot    Security  Chipset     Exit

Advanced Chipset Settings                         Options for VIA® VX800
_____

> Northbridge VIA® VX800 Configuration
> Southbridge VIA® VX800 Configuration


                                                  ←→   Select Screen
                                                  ↑ ↓   Select Item
                                                  Enter Go to SubScreen
                                                  F1    General Help
                                                  F10   Save and Exit
                                                  ESC   Exit

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```

BIOS Menu 21: Chipset

5.7.1 Northbridge VIA® VX800 Configuration

Use the **Northbridge VIA® VX800 Configuration** configures the system chipset.

```
                         BIOS SETUP UTILITY
   Main     Advanced    PCIPNP     Boot    Security  Chipset     Exit

Northbridge VIA® VX800 Configuration               Options
_____

VGA Frame Buffer Size              [128MB]


                                                  ←→   Select Screen
                                                  ↑ ↓   Select Item
                                                  Enter Go to SubScreen
                                                  F1    General Help
                                                  F10   Save and Exit
                                                  ESC   Exit

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```

BIOS Menu 22:Northbridge Chipset Configuration

▪ **VGA Frame Buffer Size [Auto]**

Specifies how much memory is allocated to the graphics.

- ▪ 8MB
- ▪ 16MB
- ▪ 32MB
- ▪ 64MB
- ▪ 128MB   **DEFAULT**
- ▪ 256MB

5.7.2 Southbridge VIA® VX800 Configuration

The **Southbridge VIA® VX800 Configuration** configures the system chipset.

```
                      BIOS SETUP UTILITY
  Main    Advanced   PCIPNP    Boot    Security  Chipset     Exit

 Southbridge Configuration                        Options
 _____
                                                  Disabled
 High Definition Audio        [Auto]              Auto



                                                  ←→   Select Screen
                                                  ↑ ↓   Select Item
                                                  Enter Go to SubScreen
                                                  F1   General Help
                                                  F10  Save and Exit
                                                  ESC  Exit

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```
BIOS Menu 23:Southbridge Chipset Configuration

▪ **HD Audio Azalia Device [Enabled]**

Enables and disables the onboard audio.

➔ **Disabled**   Audio chip disabled

➔ **Auto**   **DEFAULT**   Audio chip enabled if audio devices are attached

5.8 Exit

Use the **Exit** menu (BIOS Menu 24) to load default BIOS values, optimal failsafe values and to save configuration changes.

```
                          BIOS SETUP UTILITY
  Main     Advanced    PCIPNP     Boot    Security   Chipset     Exit

Exit Options                                      Exit system setup after
_____  saving the changes.

Save Changes and Exit
Discard Changes and Exit                          F10 key can be used for
Discard Changes                                   this operation

Load Optimal Defaults
Load Failsafe Defaults                            ←→   Select Screen
                                                  ↑ ↓   Select Item
                                                  Enter Go to SubScreen
                                                  F1   General Help
                                                  F10  Save and Exit
                                                  ESC  Exit

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```

BIOS Menu 24:Exit

▪ **Save Changes and Exit**

Use the **Save Changes and Exit** option to save the changes made to the BIOS options and to exit the BIOS configuration setup program.

▪ **Discard Changes and Exit**

Use the **Discard Changes and Exit** option to exit the BIOS configuration setup program without saving the changes made to the system.
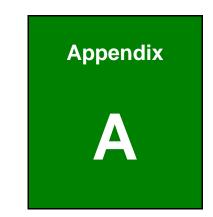
▪ **Discard Changes**

Use the **Discard Changes** option to discard the changes and remain in the BIOS configuration setup program.

▪ **Load Optimal Defaults**

Use the **Load Optimal Defaults** option to load the optimal default values for each of the parameters on the Setup menus. **F9 key can be used for this operation.**

- **Load Failsafe Defaults**

  Use the **Load Failsafe Defaults** option to load failsafe default values for each of the parameters on the Setup menus. **F8 key can be used for this operation.**

Appendix

A

Safety Precautions

A.1 Safety Precautions

WARNING:

The precautions outlined in this appendix should be strictly followed. Failure to follow these precautions may result in permanent damage to the uIBX-200-VX800.

Please follow the safety precautions outlined in the sections that follow:

A.1.1 General Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- *Make sure the power is turned off and the power cord is disconnected* when moving, installing or modifying the system.
- *Do not apply voltage levels that exceed the specified voltage range*. Doing so may cause fire and/or an electrical shock.
- *Electric shocks can occur* if opened while still powered on.
- *Do not drop or insert any objects* into the ventilation openings.
- *If considerable amounts of dust, water, or fluids enter the system*, turn off the power supply immediately, unplug the power cord, and contact the system vendor.
- **DO NOT**:
  - Drop the system against a hard surface.
  - Strike or exert excessive force onto the LCD panel.
  - Touch any of the LCD panels with a sharp object
  - In a site where the ambient temperature exceeds the rated temperature

A.1.2 Anti-static Precautions

⚠️ **WARNING:**

Failure to take ESD precautions during the installation of the uIBX-200-VX800 may result in permanent damage to the uIBX-200-VX800 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the uIBX-200-VX800. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the uIBX-200-VX800 is opened and any of the electrical components are handled, the following anti-static precautions are strictly adhered to.

- *Wear an anti-static wristband*: Wearing a simple anti-static wristband can help to prevent ESD from damaging any electrical component.
- *Self-grounding*: Before handling any electrical component, touch any grounded conducting material. During the time the electrical component is handled, frequently touch any conducting materials that are connected to the ground.
- *Use an anti-static pad*: When configuring or working with an electrical component, place it on an antic-static pad. This reduces the possibility of ESD damage.
- *Only handle the edges of the electrical component*: When handling the electrical component, hold the electrical component by its edges.

A.2 Maintenance and Cleaning Precautions

When maintaining or cleaning the uIBX-200-VX800, please follow the guidelines below.

A.2.1 Maintenance and Cleaning

Prior to cleaning any part or component of the uIBX-200-VX800, please read the details below.
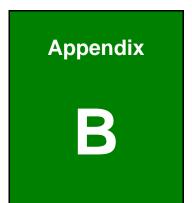
- Except for the LCD panel, never spray or squirt liquids directly onto any other components. To clean the LCD panel, gently wipe it with a piece of soft dry cloth or a slightly moistened cloth.

- The interior of the uIBX-200-VX800 does not require cleaning. Keep fluids away from the uIBX-200-VX800 interior.
- Be cautious of all small removable components when vacuuming the uIBX-200-VX800.
- Turn the uIBX-200-VX800 off before cleaning the uIBX-200-VX800.
- Never drop any objects or liquids through the openings of the uIBX-200-VX800.
- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning the uIBX-200-VX800.
- Avoid eating, drinking and smoking within vicinity of the uIBX-200-VX800.

A.2.2 Cleaning Tools

Some components in the uIBX-200-VX800 may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the uIBX-200-VX800.

- *Cloth* – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the uIBX-200-VX800.
- *Water or rubbing alcohol* – A cloth moistened with water or rubbing alcohol can be used to clean the uIBX-200-VX800.
- *Using solvents* – The use of solvents is not recommended when cleaning the uIBX-200-VX800 as they may damage the plastic parts.
- *Vacuum cleaner* – Using a vacuum specifically designed for computers is one of the best methods of cleaning the uIBX-200-VX800. Dust and dirt can restrict the airflow in the uIBX-200-VX800 and cause its circuitry to corrode.
- *Cotton swabs* - Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas.
- *Foam swabs* - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

B

Hazardous Materials Disclosure

B.1 Hazardous Materials Disclosure Table for Products Certified as RoHS Compliant Under 2002/95/EC Without Mercury

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the table on the next page.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	X	O	O	O	O	X
Display	X	O	O	O	O	X
Printed Circuit Board	X	O	O	O	O	X
Metal Fasteners	X	O	O	O	O	O
Cable Assembly	X	O	O	O	O	X
Fan Assembly	X	O	O	O	O	X
Power Supply Assemblies	X	O	O	O	O	X
Battery	O	O	O	O	O	O
O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006						
X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006						

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签，此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	X	O	O	O	O	X
显示	X	O	O	O	O	X
印刷电路板	X	O	O	O	O	X
金属螺帽	X	O	O	O	O	O
电缆组装	X	O	O	O	O	X
风扇组装	X	O	O	O	O	X
电力供应组装	X	O	O	O	O	X
电池	O	O	O	O	O	O
O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。 X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。						