

# QBOX-1300

Compact Box PC with Intel® Atom N450 Platform

## User's Guide



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Quanmax reserves the right to make changes without notice in product or component design as warranted by evolution in user needs or progress in engineering or manufacturing technology.

Changes which affect the operation of the unit will be documented in the next revision of this user's guide.

| <b>Revision</b> | <b>Date</b> | <b>Edited by</b> | <b>Changes</b>  |
|-----------------|-------------|------------------|-----------------|
| 1.0             | 2010/10/04  | Zack             | Initial Release |



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# Safety Instructions

## ■ Before You Begin

Before handling the product, read the instructions and safety guidelines on the following pages to prevent damage to the product and to ensure your own personal safety. Refer to the “Advisories” section in the Preface for advisory conventions used in this user’s guide, including the distinction between Warnings, Cautions, Important Notes, and Notes.

- Always use caution when handling/operating a computer. Only qualified, experienced, authorized electronics service personnel should access the interior of a computer. The power supplies produce high voltages and energy hazards, which can cause bodily harm.
- Use extreme caution when installing or removing components. Refer to the installation instructions in this user’s guide for precautions and procedures. If you have any questions, please contact Quanmax Post-Sales Technical Support.
- Access can only be gained by service persons or by users who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken; and access is through the use of a tool or lock and key, or other means of security, and is controlled by authority responsible for the location.

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### WARNING

High voltages are present inside the chassis when the unit’s power cord is plugged into an electrical outlet. Turn off system power, turn off the power supply, and then disconnect the power cord from its source before removing the chassis cover. Turning off the system power switch does not remove power to components.



The product chassis may be hot when the system is working. Please do not touch the surface before turn off the system power and wait for about 5 minutes until the system cools down.

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## ■ When Working Inside a Computer

Before taking covers off a computer, perform the following steps:

1. Turn off the computer and any peripherals.
2. Disconnect the computer and peripherals from their power sources or subsystems to prevent electric shock or system board damage. This does not apply when hot swapping parts.
3. Follow the guidelines provided in “Preventing Electrostatic Discharge” on the following page.
4. Disconnect any telephone or telecommunications lines from the computer.

In addition, take note of these safety guidelines when appropriate:

- To help avoid possible damage to system boards, wait five seconds after turning off the computer before removing a component, removing a system board, or disconnecting a peripheral device from the computer.
- When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. Some cables have a connector with locking tabs. If you are disconnecting this type of cable, press in on the locking tabs before disconnecting the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before connecting a cable, make sure both connectors are correctly oriented and aligned.

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### CAUTION



Do not attempt to service the system yourself except as explained in this user's guide.  
Follow installation and troubleshooting instructions closely.

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## ■ Preventing Electrostatic Discharge

Static electricity can harm system boards. Perform service at an ESD workstation and follow proper ESD procedure to reduce the risk of damage to components.

Quanmax strongly encourages you to follow proper ESD procedure, which can include wrist straps and smocks, when servicing equipment.

You can also take the following steps to prevent damage from electrostatic discharge (ESD):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component's antistatic packing material until you are ready to install

the component in a computer. Just before unwrapping the antistatic packaging, be sure you are at an ESD workstation or grounded. This will discharge any static electricity that may have built up in your body.

- When transporting a sensitive component, first place it in an antistatic container or packaging.
- Handle all sensitive components at an ESD workstation. If possible, use antistatic floor pads and workbench pads.
- Handle components and boards with care. Don't touch the components or contacts on a board. Hold a board by its edges or by its metal mounting bracket.
- Do not handle or store system boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.

## ■ Instructions for Lithium Battery

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### **WARNING**

Danger of explosion when battery is replaced with incorrect type. Only replace with the same or equivalent type recommended by the manufacturer.

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Do not dispose of lithium batteries in domestic waste. Dispose of the battery according to the local regulations dealing with the disposal of these special materials (e.g. to the collecting points for disposal of batteries)

## ■ Voltage Ratings

The external power adaptor of the QBOX-1300 has the following voltage ratings:

- Input: 100-240 VAC, 50-60 Hz
- Output: +12Vdc, 5 Amp, 60 Watts

# Preface

## ■ How to Use This Guide

This guide is designed to be used as step-by-step instructions for installation, and as a reference for operation, troubleshooting, and upgrades.

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### NOTE



Driver downloads and additional information are available under Downloads on our web site: [www.quanmax.com](http://www.quanmax.com).

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## ■ Unpacking

When unpacking, follow these steps:

1. After opening the box, save it and the packing material for possible future shipment.
2. Remove all items from the box. If any items listed on the purchase order are missing, notify Quanmax customer service immediately.
3. Inspect the product for damage. If there is damage, notify Quanmax customer service immediately. Refer to “Warranty Policy” for the return procedure.

## ■ Regulatory Compliance Statements

This section provides the FCC compliance statement for Class A devices.

### **FCC Compliance Statement:**

This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radiofrequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause



interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by Quanmax could void the user's authority to operate the equipment.

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#### NOTE



The assembler of a personal computer system may be required to test the system and/or make necessary modifications if a system is found to cause harmful interference or to be noncompliant with the appropriate standards for its intended use.

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## ■ Warranty Policy

### Limited Warranty

Quanmax Inc.'s detailed Limited Warranty policy can be found under Support at [www.quanmax.com](http://www.quanmax.com). Please consult your distributor for warranty verification.

The limited warranty is void if the product has been subjected to alteration, neglect, misuse, or abuse; if any repairs have been attempted by anyone other than Quanmax or its authorized agent; or if the failure is caused by accident, acts of God, or other causes beyond the control of Quanmax or the manufacturer. Neglect, misuse, and abuse shall include any installation, operation, or maintenance of the product other than in accordance with the user's guide.

No agent, dealer, distributor, service company, or other party is authorized to change, modify, or extend the terms of this Limited Warranty in any manner whatsoever.

Quanmax reserves the right to make changes or improvements in any product without incurring any obligation to similarly alter products previously purchased.

### Return Procedure

For any Limited Warranty return, please contact Support at [www.quanmax.com](http://www.quanmax.com) and login to obtain a Return Material Authorization (RMA) Number. If you do not have an

account, send an email to support@quanmax.com to apply for one.

All product(s) returned to Quanmax for service or credit must be accompanied by a Return Material Authorization (RMA) Number. Freight on all returned items must be prepaid by the customer who is responsible for any loss or damage caused by common carrier in transit. Returns for Warranty must include a Failure Report for each unit, by serial number(s), as well as a copy of the original invoice showing the date of purchase.

To reduce risk of damage, returns of product must be in a Quanmax shipping container. If the original container has been lost or damaged, new shipping containers may be obtained from Quanmax Customer Service at a nominal cost. Quanmax owns all parts removed from repaired products. Quanmax uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Quanmax repairs or replaces a product, its warranty term is not extended.

Shipments not in compliance with this Limited Warranty Return Policy will not be accepted by Quanmax.

## **Limitation of Liability**

In no event shall Quanmax be liable for any defect in hardware, software, loss, or inadequacy of data of any kind, or for any direct, indirect, incidental, or consequential damages in connection with or arising out of the performance or use of any product furnished hereunder. Quanmax's liability shall in no event exceed the purchase price of the product purchased hereunder. The foregoing limitation of liability shall be equally applicable to any service provided by Quanmax or its authorized agent.

## **■ Maintaining Your Computer**

### **Environmental Factors**

#### **■ Temperature**

The ambient temperature within an enclosure may be greater than room ambient temperature. Installation in an enclosure should be such that the amount of air flow required for safe operation is not compromised.

Consideration should be given to the maximum rated ambient temperature.

Overheating can cause a variety of problems, including premature aging and failure of chips or mechanical failure of devices.

If the system has been exposed to abnormally cold temperatures, allow a two-hour warm-up period to bring it up to normal operating temperature before

turning it on. Failure to do so may cause damage to internal components, particularly the hard disk drive.

### ■ **Humidity**

High-humidity can cause moisture to enter and accumulate in the system. This moisture can cause corrosion of internal components and degrade such properties as electrical resistance and thermal conductivity. Extreme moisture buildup inside the system can result in electrical shorts, which can cause serious damage to the system.

Buildings in which climate is controlled usually maintain an acceptable level of humidity for system equipment. However, if a system is located in an unusually humid location, a dehumidifier can be used to maintain the humidity within an acceptable range. Refer to the “Specifications” section of this user’s guide for the operating and storage humidity specifications.

### ■ **Altitude**

Operating a system at a high altitude (low pressure) reduces the efficiency of the cooling fans to cool the system. This can cause electrical problems related to arcing and corona effects. This condition can also cause sealed components with internal pressure, such as electrolytic capacitors, to fail or perform at reduced efficiency.

## **Power Protection**

The greatest threats to a system’s supply of power are power loss, power spikes, and power surges caused by electrical storms, which interrupt system operation and/or damage system components. To protect your system, always properly ground power cables and one of the following devices.

### ■ **Surge Protector**

Surge protectors are available in a variety of types and usually provide a level of protection proportional with the cost of the device. Surge protectors prevent voltage spikes from entering a system through the AC power cord. Surge protectors, however, do not offer protection against brownouts, which occur when the voltage drops more than 20 percent below the normal AC line voltage level.

### ■ **Line Conditioner**

Line conditioners go beyond the overvoltage protection of surge protectors.

Line conditioners keep a system's AC power source voltage at a fairly constant level and, therefore, can handle brownouts. Because of this added protection, line conditioners cost more than surge protectors. However, line conditioners cannot protect against a complete loss of power.

#### ■ **Uninterruptible Power Supply**

Uninterruptible power supply (UPS) systems offer the most complete protection against variations on power because they use battery power to keep the server running when AC power is lost. The battery is charged by the AC power while it is available, so when AC power is lost, the battery can provide power to the system for a limited amount of time, depending on the UPS system.

UPS systems range in price from a few hundred dollars to several thousand dollars, with the more expensive units allowing you to run larger systems for a longer period of time when AC power is lost. UPS systems that provide only 5 minutes of battery power let you conduct an orderly shutdown of the system, but are not intended to provide continued operation. Surge protectors should be used with all UPS systems, and the UPS system should be Underwriters Laboratories (UL) safety approved.

# Chapter 1

## Introduction

### ■ Overview

The QBOX-1300 is a fan-less Box PC that is ideal for space critical applications. This embedded hardware platform is designed with high performance and low power consumption of the Intel® Atom N450 processor with Intel® NM10 chipset and supports DDR2 667 SODIMM up to 2GB. Featured are a 2.5" SATA hard drive bay, SATA, USB, GbE, USB 2.0, VGA, Mic-In, Line-In, Line-Out, and optional 1 x Mini PCI-Express Socket (for optional WiFi or 3G module), 1x SIM card 2x3 pin header (for 3.5G solution). The QBOX-1300 provides high reliability rugged case not only for great protection from EMI, cold and heat, but also integrated with passive cooling design for quiet fan-less operation such as Digital Signage, Transportation, Surveillance, and Thin Client.

### Checklist

- QBOX-1300
- Power Adapter
- Power Cord
- Driver CD
- Quick installation Guide
- *Optional VESA Mounting Kit*

## Features

- Fan-less Design Compact Sized
- Intel® Atom N450 processor and Intel® NM10 Chipset
- Support DDR2 667 SODIMM up to 2GB
- Support 1x GbE, 1x 2.5" SATA HDD, 4x USB, VGA, COM, S/PDIF, Mic-In, Line-In, Line-Out.
- 1 x Mini PCI-Express Socket (for optional WiFi or 3G module)
- 1x SIM card 2x3 pin header (for optional 3.5G solution)

## Product Specifications

|                               |  |
|-------------------------------|--|
| <b>Dimensions</b>             | 253 x 178 x 18.7 mm (W x H x D)  |
| <b>Weight</b>                 | 1000 g   |
| <b>CPU/ Chipset</b>           | Intel® Atom N450 Processor , NM10  |
| <b>RAM</b>                    | 1 x DDR2 667 SODIMM up to 2GB  |
| <b>Storage</b>                | 1 x 2.5" SATA HDD  |
| <b>Front IO</b>               | 1x button for power on/off<br>1x POWER LED (Green)<br>1x HDD LED (Red)<br>1x Wireless LED (Blue)<br>2x USB2.0  |
| <b>Rear IO</b>                | 1x DC JACK for power input<br>1x D-SUB 15 connector<br>1xD-SUB 9 connector<br>2x USB 2.0<br>1x RJ-45, GbE port<br>1x S/PDIF<br>1x Phone Jack for Line-In<br>1x Phone Jack for Line-Out<br>1x Phone Jack for MIC-In |
| <b>Expansion</b>              | 1 x Mini PCI-Express Socket (for optional WiFi or 3G module)<br>1x SIM card 2x3 pin header (for 3.5G solution)   |
| <b>Cooling</b>                | Fanless  |
| <b>Power Unit</b>             | Input: 100-240 VAC, 50-60 Hz<br>Output: +12Vdc   |
| <b>Temperature / Humidity</b> | Operating: 0°C to 40°C, 0%-90%, non-condensing<br>Storage: -20°C to 80°C, 0%-90%, non-condensing   |
| <b>Mounting</b>               | VESA-mount (optional)  |
| <b>Certifications</b>         | CE, FCC Class A  |

Table 1 QBOX-1300 product specifications

## ■ System tour

Refer to the figures below to identify the components of the system.

### ■ Front Panel



Figure 1 Front Panel

#### **Power Switch**

The power button allows powering ON and OFF the system.

#### **Power LED (Green)**

The power LED will light when the PC is power-on.

#### **HDD LED (Red)**

The hard disk LED blinks when data is being written into or read from the HDD.

#### **Wireless LED (Blue)**

When the data is Transferring, the WiFi LED will blink.

#### **USB**

The USB (Universal Serial Bus) port is compatible with USB devices such as keyboards, mouse devices, cameras, and hard disk drives. USB allows many devices to run simultaneously on a single computer, with some peripheral acting as additional plug-in sites or hubs.



## Rear Panel



Figure 2 Rear Panel

### Power Input

The supplied power adapter converts AC power to DC for use with this jack. Power supplied through this jack supplies power to the PC. To prevent damage to the PC, always use the supplied power adapter.

### COM

D-Sub 9 pin connector for RS-232 connection

### USB

The USB (Universal Serial Bus) port is compatible with USB devices such as keyboards, mouse devices, cameras, and hard disk drives. USB allows many devices to run simultaneously on a single computer, with some peripheral acting as additional plug-in sites or hubs.

### VGA

D-Sub 15 pin VGA connector for display output

### Phone Jack

#### Audio Out

The stereo headphone jack is used to connect the system's audio out signal to amplified speakers or headphones.

**MIC-IN**

The microphone jack is designed to connect the microphone used for video conferencing, voice narrations, or simple audio recordings.

**Line-IN**

The Line-in jack is designed to take input from a higher-powered sound source.

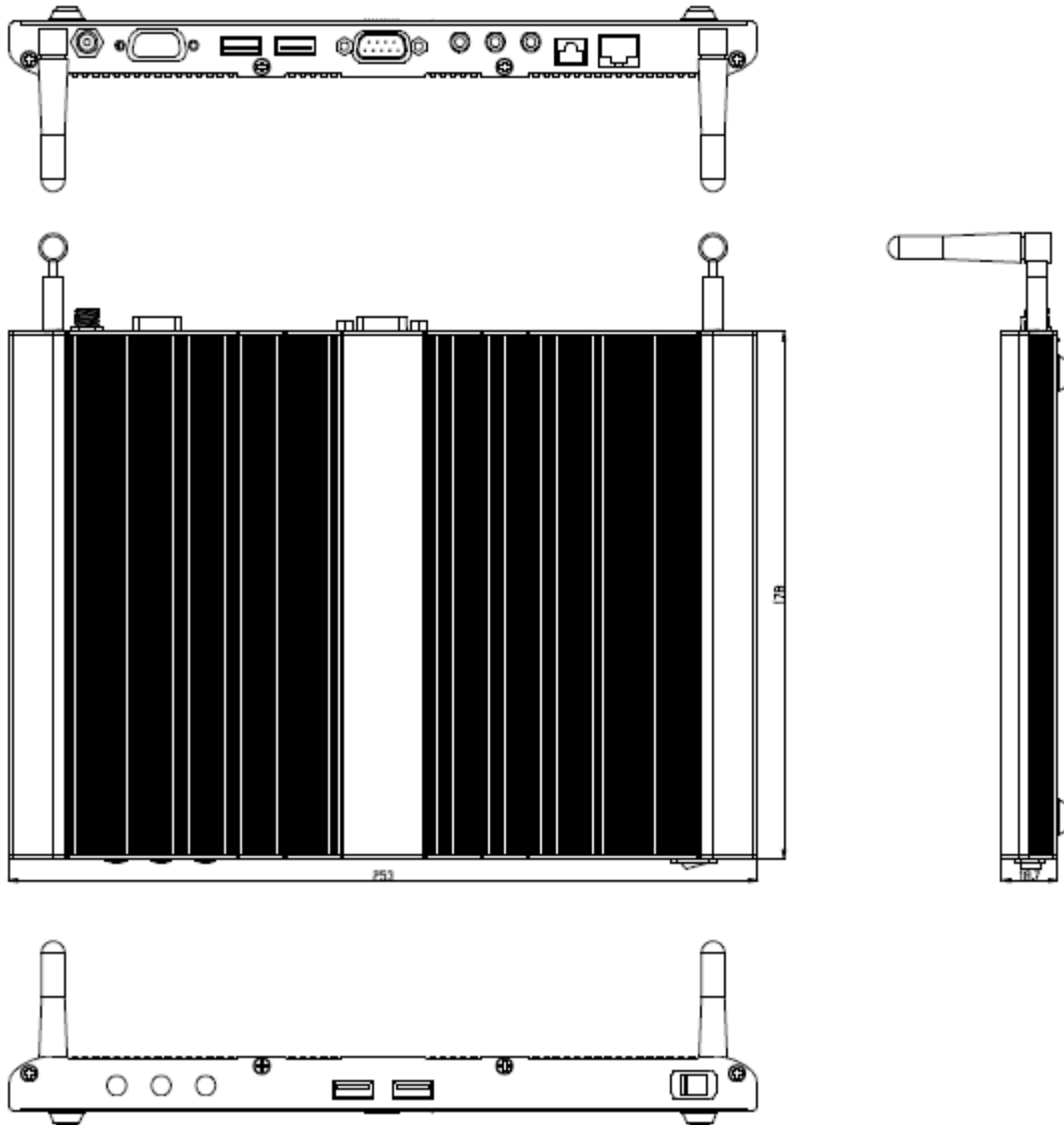
**S/PDIF**

S/PDIF output for carrying digital audio signals out to the device.

**Ethernet**

The eight-pin RJ-45 LAN port supports a standard Ethernet cable for connection to a local network.

# Mechanical Dimensions



Dimension: 253 x 178 x 18.7 mm (W x H x D)

Figure 3 Mechanical Dimensions

## Chapter 2

# Getting Started

### ■ Setting up your PC

#### ■ Connect the monitor, mouse and keyboard

##### Connecting the monitor

Connect the VGA cable from your display to the VGA port.

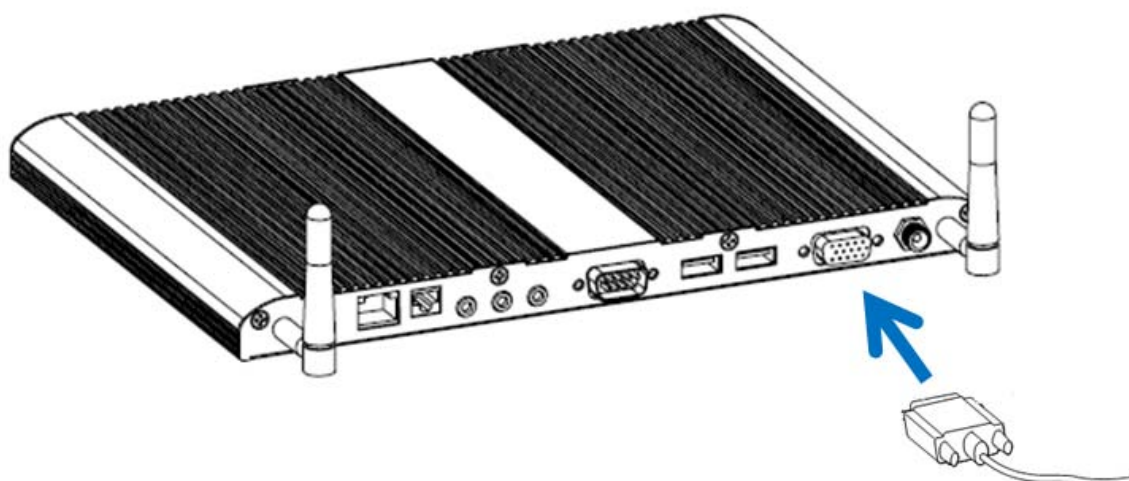


Figure 4 Connect the VGA cable

#### NOTE



When the system reboots without connecting the VGA, there might be no image on screen when you insert the VGA cable. Please pressing **<Ctrl>+<Alt>+<F4>** simultaneously to show the image on screen.

---

## Connecting USB mouse & keyboard

Your QBOX-1300 does not come with a keyboard and mouse connector, but you can use any USB keyboard or mouse with your computer.

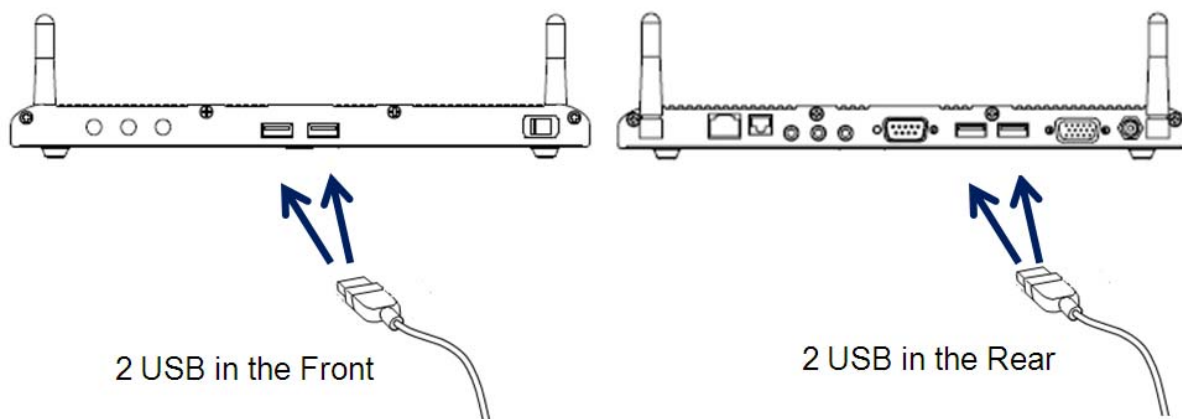


Figure 5 Connecting USB mouse & keyboard

### NOTE



Using a third-party USB mouse or keyboard may require software drivers. Check the manufacturer's website for the latest software drivers.

## ■ Connecting to a network device

Connect one end of a network cable to the LAN port on the system rear panel and the other end to a hub or switch.

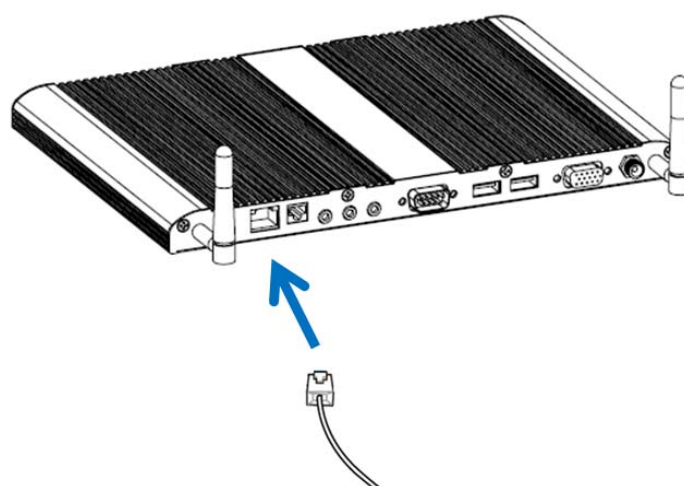


Figure 6 Network cable with RJ45 connector

## ■ Turning on the system

1. Connect the power adapter cable to the DC jack (DC IN) of the QBOX-1200
2. Connect the power cable to the power adapter

3. Connect the power cable to a power outlet
4. Press the power switch on the front panel to turn on the system

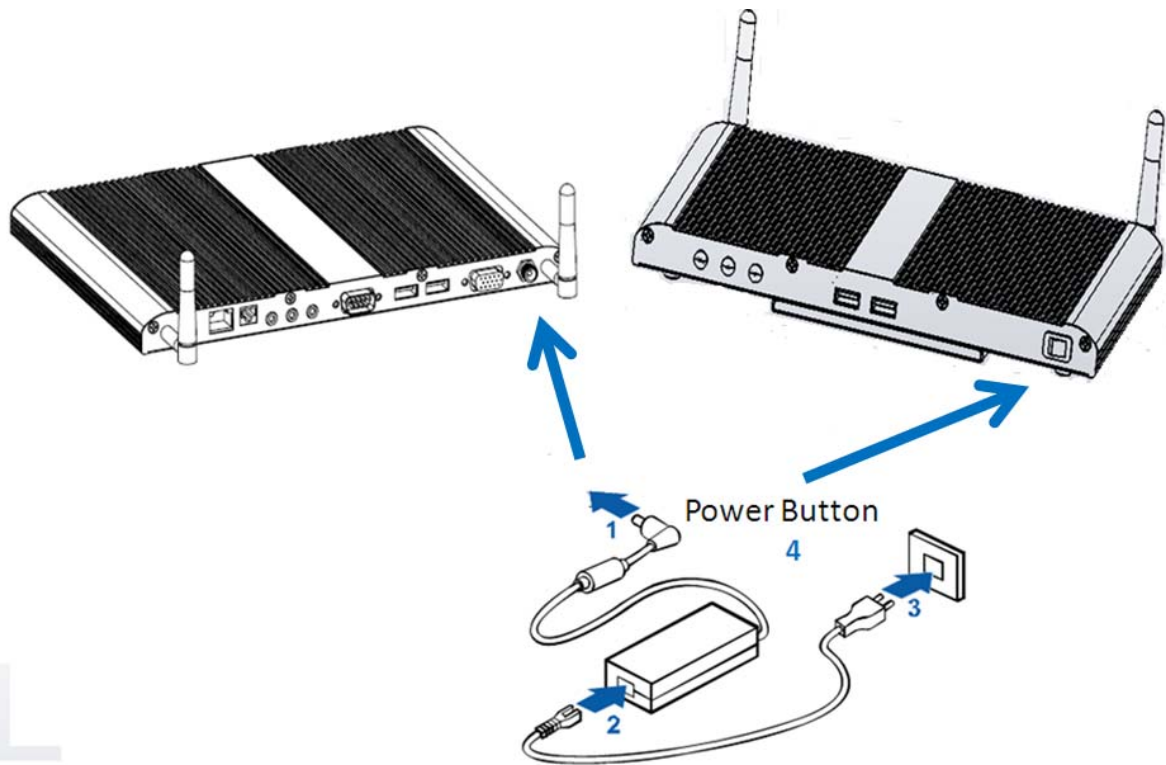


Figure 7 Turning on the system

## ■ Connecting VESA Mount on QBox-1300

1. By sliding the desktop bracket onto the rails of QBox-1300 on the bottom in either ways from front side or back side.

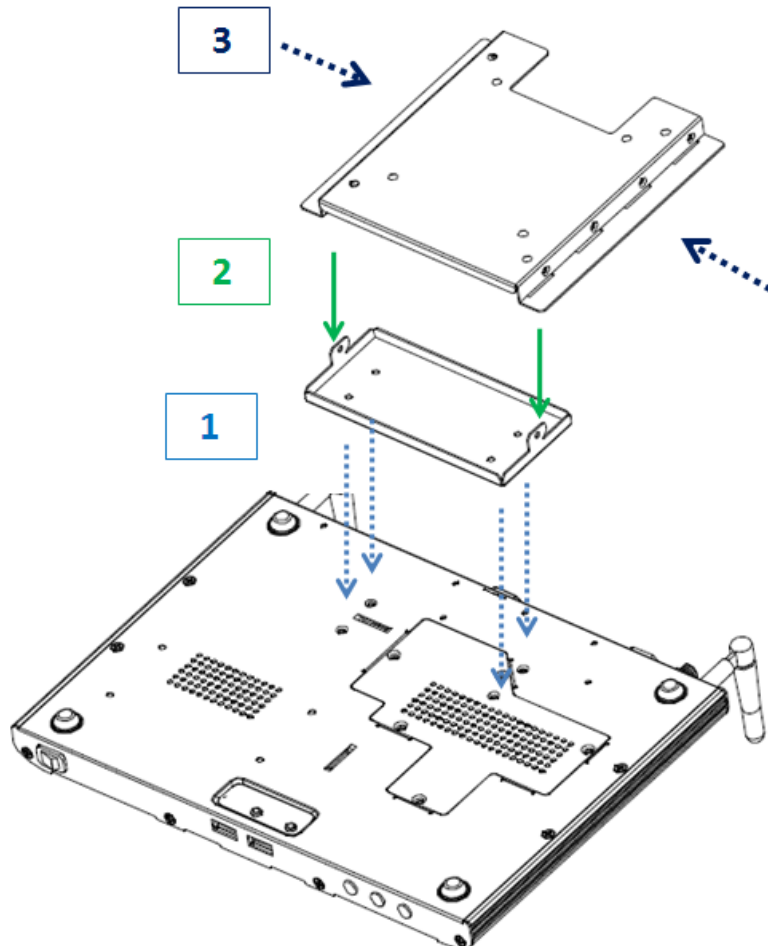


Figure 8 VESA Mount Assembly

- (1) Tightening the base kit with four screws onto the QBox-1300
- (2) Mount the VESA Mount kit on the 1<sup>st</sup> kit
- (3) Adjust the positions you desire and tightening with screws on each side of the VESA Mount Kit

2. Then tighten the screw as shown below.

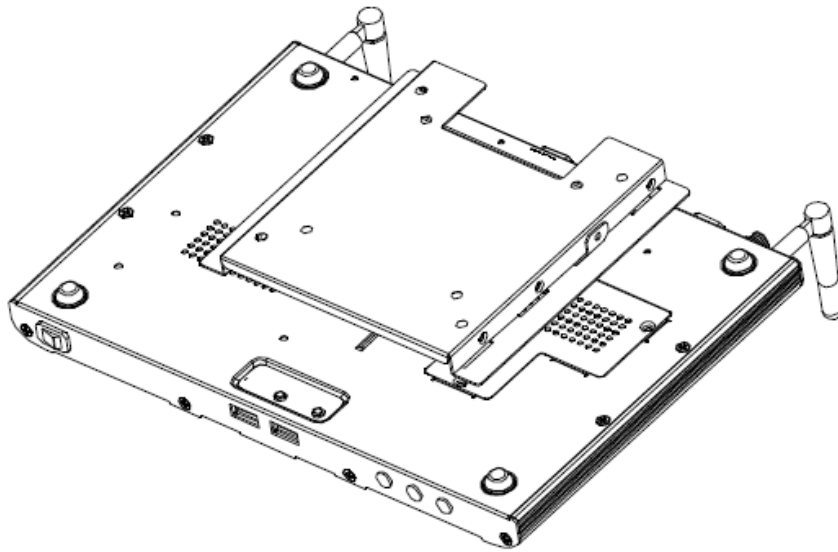


Figure 9 VESA Mount on QBox-1300

## ■ Mounting your PC to a monitor

1. Secure the VESA mounting kit to your monitor with four screws.

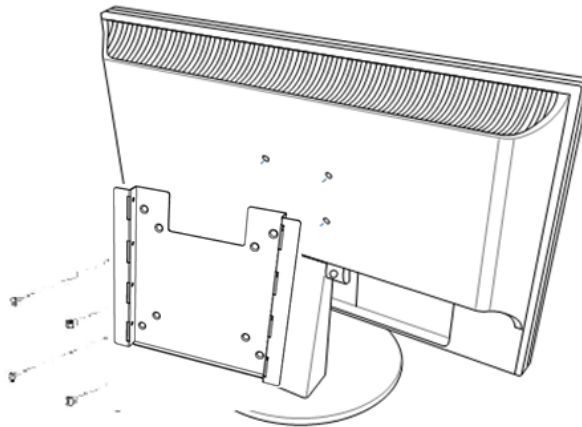


Figure 10 VESA mounting (1)

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### NOTE

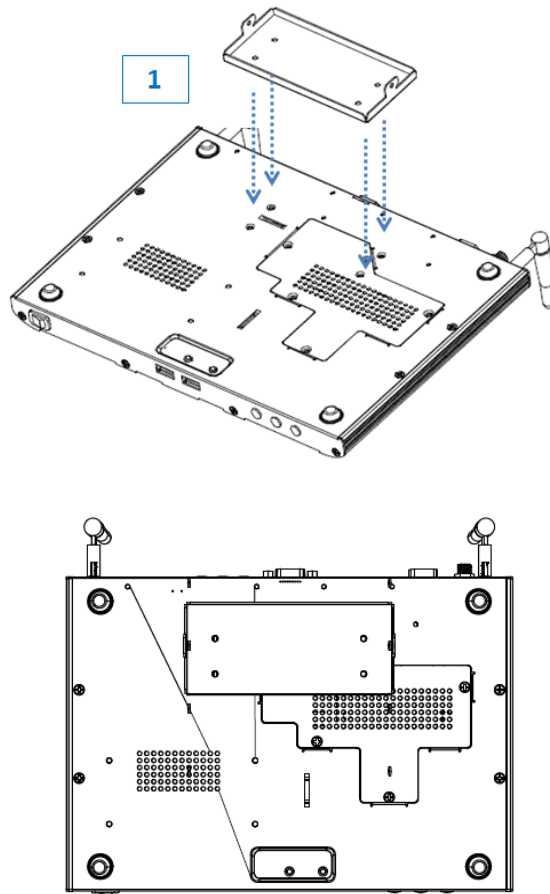


To fasten the metal shelf, your monitor must comply with VESA75 or VESA100 standard.

---



2. Assemble VESA Mounting Base Kit onto the QBox-1300



3. Place the QBox-1300 onto the monitor and secure it with two screws as shown below.

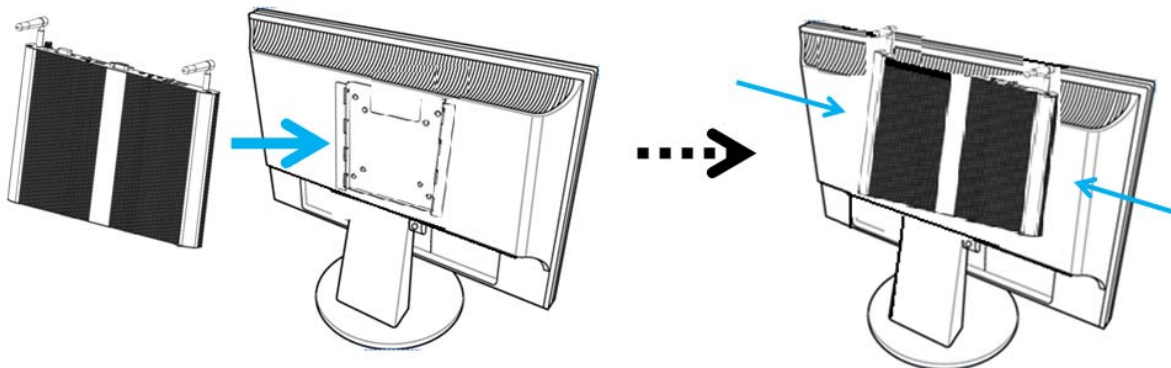
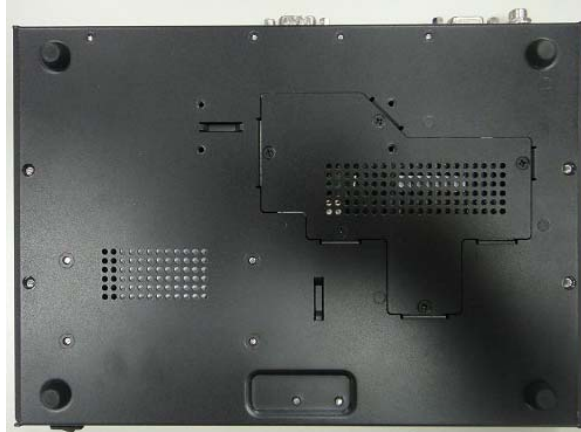


Figure 11 VESA mounting (2)

## ■ Installing SIM Card

1. Open the chassis cover by un-tightening five screws on the bottom.



2. Then you can see the SIM card socket.



3. Lift the SIM Card socket and insert the SIM card.



Figure 12 SIM Card Installation

## Chapter 3

# AMI BIOS Setup

### ■ Overview

This chapter provides a description of the AMI BIOS. The BIOS setup menus and available selections may vary from those of your product. For specific information on the BIOS for your product, please contact Quanmax.



**NOTE:** The BIOS menus and selections for your product may vary from those in this chapter. For the BIOS manual specific to your product, please contact Quanmax

---

AMI's ROM BIOS provides a built-in Setup program, which allows the user to modify the basic system configuration and hardware parameters. The modified data will be stored in a battery-backed CMOS, so that data will be retained even when the power is turned off. In general, the information saved in the CMOS RAM will not need to be changed unless there is a configuration change in the system, such as a hard drive replacement or when a device is added.

It is possible for the CMOS battery to fail, which will cause data loss in the CMOS only. If this happens you will need to reconfigure your BIOS settings.

## ■ Main Menu

The BIOS Setup is accessed by pressing the DEL key after the Power-On Self-Test (POST) memory test begins and before the operating system boot begins. Once you enter the BIOS Setup Utility, the Main Menu will appear on the screen. The Main Menu provides System Overview information and allows you to set the System Time and Date. Use the “<” and “>” cursor keys to navigate between menu screens.

Table 2 BIOS Main Menu

| BIOS SETUP UTILITY                                       |          |      |                  |       |          |  |
|--|----------|------|------------------|-------|----------|--|
| Main   | Advanced | Boot | Chipset          | Power | Security | Exit   |
| System Date  |          |      | [Mon 08/18/2010] |       |          | Use [ENTER], [TAB] or [SHIFT-TAB] to select a field. |
| System Time  |          |      | [10:18:15]       |       |          | Use [+] or [-] to configure system Time.             |
| > SATA 1   |          |      | : [Not Detected] |       |          | ← Select Screen                                      |
| > SATA 2   |          |      | : [Not Detected] |       |          | ↑↓ Select Item                                       |
| > System Information                                     |          |      |                  |       |          | + - Change Field                                     |
|  |          |      |                  |       |          | Tab Select Field                                     |
|  |          |      |                  |       |          | F1 General Help                                      |
|  |          |      |                  |       |          | F10 Save and Exit                                    |
|  |          |      |                  |       |          | ESC Exit   |
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Table 3 IDE Device Setting Menu

| BIOS SETUP UTILITY                                       |                |  |  |  |  |                   |
|--|----------------|--|--|--|--|-------------------|
| Main   |                |  |  |  |  |                   |
| SATA 1   |                |  | Disable: Disables LBA Mode.  |  |  |                   |
| Device   | : Not Detected |  | Auto: Enables LBA Mode if the device supports it and the device is not already formatted with LBA Mode disabled. |  |  |                   |
| LBA/ Large Mode  |                |  | [Auto]   |  |  |                   |
| DMA Mode   |                |  | [Auto]   |  |  |                   |
| S.M.A.R.T  |                |  | [Auto]   |  |  |                   |
|  |                |  |  |  |  | ← Select Screen   |
|  |                |  |  |  |  | ↑↓ Select Item    |
|  |                |  |  |  |  | + - Change Field  |
|  |                |  |  |  |  | Tab Select Field  |
|  |                |  |  |  |  | F1 General Help   |
|  |                |  |  |  |  | F10 Save and Exit |
|  |                |  |  |  |  | ESC Exit          |
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## LBA/ Large Mode

Enables or disables the LBA (Logical Block Addressing)/ Large mode. Setting to Auto enables the LBA mode if the device supports this mode, and if the device was not previously formatted with LBA mode disabled.

Options: Disabled, Auto

## DMA Mode

Options: Auto only

## S.M.A.R.T

SMART stands for Smart Monitoring, Analysis, and Reporting Technology. It allows AMIBIOS to use the SMART protocol to report server system information over a network.

Options: Auto, Disabled, Enabled

Table 4 System Information

| BIOS SETUP UTILITY   |   |
|--|---|
| <b>Main</b>  |   |
| AMIBIOS<br>Version : 1.0<br>Build Date: :08/17/10              |   |
| Processor<br>Intel® ATOM™ CPU N450 @ 1.66GHz<br>Speed :1666MHz | ← Select Screen<br>↑↓ Select Item<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |
| Physical Memory<br>Size : 1024MB<br>Sped ; 667MHz              |   |
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## ■ Advanced Menu

Table 5 Advanced Menu

| BIOS SETUP UTILITY   |          |  |         |       |          |      |
|--|----------|--|---------|-------|----------|------|
| Main   | Advanced | Boot   | Chipset | Power | Security | Exit |
| Advanced Settings  |          |  |         |       |          |      |
| <p><b>Warning: Setting wrong values in below sections may cause system to malfunction.</b></p> <p>&gt; OnBoard Peripherals Configuration</p> <p>&gt; Hardware Health Configuration</p> |          | <p>← Select Screen</p> <p>↑↓ Select Item</p> <p>Enter Go To Sub Screen</p> <p>F1 General Help</p> <p>F10 Save and Exit</p> <p>ESC Exit</p> |         |       |          |      |
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Press <Enter> to select a sub-menu for detailed options.

Table 6 OnBoard Peripherals Configuration Settings

| BIOS SETUP UTILITY                                       |                   |                   |  |  |  |  |
|--|-------------------|-------------------|--|--|--|--|
| Advanced   |                   |                   |  |  |  |  |
| OnBoard Peripherals Configuration Settings               |                   | Options           |  |  |  |  |
| <b>USB Controller</b>                                    | <b>[Enabled]</b>  | Disabled          |  |  |  |  |
| USB 2.0 Controller                                       | [Enabled]         | Enabled           |  |  |  |  |
| USB 2.0 Control Mode                                     | [HiSpeed]         |                   |  |  |  |  |
| USB Device Legacy Support                                | <b>[Enabled]</b>  |                   |  |  |  |  |
| Audio Controller   | <b>[Auto]</b>     | <> Select Screen  |  |  |  |  |
| Onboard LAN Controller                                   | <b>[Enabled]</b>  | ↑↓ Select Item    |  |  |  |  |
| Onboard LAN OPTROM                                       | <b>[Disabled]</b> | +- Change Field   |  |  |  |  |
| >OnboardATA Devices                                      |                   | Tab Select Field  |  |  |  |  |
|  |                   | F1 General Help   |  |  |  |  |
|  |                   | F10 Save and Exit |  |  |  |  |
|  |                   | ESC Exit          |  |  |  |  |
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## USB Controller

Options: Enabled, Disabled

## USB 2.0 Controller

Options: Enabled, Disabled

## USB 2.0 Control Mode

Options: Full Speed, Hi Speed

## USB Device Legacy Support

Options: Enabled, Disabled, Auto

## Audio Controller

Options: Auto, Disabled

## Onboard LAN Controller

Options: Enabled, Disabled

## Onboard LAN OPTROM

Options: Enabled, Disabled

Table 7 OnBoard ATA Configuration

| BIOS SETUP UTILITY                                       |                   |
|--|-------------------|
| Advanced   |                   |
| OnBoard ATA Configuration                                | Options           |
| SATA Controller [Enabled]                                | IDE               |
| Configure SATA as [IDE]                                  | AHCI              |
|  | Disabled          |
|  | ← Select Screen   |
|  | ↑↓ Select Item    |
|  | + - Change Option |
|  | F1 General Help   |
|  | F10 Save and Exit |
|  | ESC Exit          |
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## SATA Controller

Options: Enabled, Disabled

## Configure SATA as

Options: IDE, AHCI, Disabled

Table 8 Hardware Health Configuration

| BIOS SETUP UTILITY            |              |  |
|-------------------------------|--------------|--|
| Advanced                      |              |  |
| Hardware Health Configuration |              | Disabled   |
| CPU Shutdown Temperature      | [Disabled]   | 80°C/ 176°F<br>85°C/ 185°F                       |
| CPU Temperature               | :42°C/ 105°F | 90°C/ 194°F                                      |
| System Temperature            | :44°C/ 111°F | 95°C/ 203°F                                      |
| +V CORE                       | :1.176 V     | ← Select Screen                                  |
| +3.3V                         | :3.408 V     | ↑↓ Select Item                                   |
| +5V                           | :5.130 V     | + - Change Option                                |
| Input                         | :11.868 V    | F1 General Help<br>F10 Save and Exit<br>ESC Exit |

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## CPU Shutdown Temperature

Options: Disabled, 80°C/ 176°F, 85°C/ 185°F, 90°C/ 194°F, 95°C/ 203°F



# Boot Menu

Table 9 Boot Menu

| BIOS SETUP UTILITY  |          |      |  |       |          |      |
|---|----------|------|--|-------|----------|------|
| Main  | Advanced | Boot | Chipset  | Power | Security | Exit |
| <b>Boot Settings</b><br><hr/> <b>Quick Boot</b> [Enabled]<br>Full Screen Logo Display [Disabled]<br>Bootup Num-Lock [ON]<br>Wait For 'F1' If Error [Enabled]<br>Hit 'DEL' Message Display [Enabled] |          |      | Allow BIOS to Skip certain tests while booting. This will decrease the time needed to boot the system.<br><br><> Select Screen<br>↑↓ Select Item<br>+- Change Option<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |       |          |      |
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## Quick Boot

Enabling this item allows BIOS to skip some Power On Self Tests (POST) while booting to decrease the time needed to boot the system. When set to [Disabled], BIOS performs all the POST items.

Options: Disabled, Enabled

## Full Screen LOGO Display

Options: Disabled, Enabled

## Bootup Num-Lock [On]

Allow you to select the power-on state for the NumLock.

Options: Off, On

## Wait for 'F1' If Error [Enabled]

When set to Enabled, the system waits for F1 key to be pressed when error occurs.

Options: Disabled, Enabled

## Hit 'DEL' Message Display [Enabled]

When set to Enabled, the system displays the message 'Press DEL to run Setup' during POST

Options: Disabled, Enabled

## ■ Chipset Menu

Table 10 Chipset Menu

| BIOS SETUP UTILITY                                       |          |                |   |                   |          |      |
|--|----------|----------------|---|-------------------|----------|------|
| Main   | Advanced | Boot           | <b>Chipset</b>  | Power             | Security | Exit |
| Chipset Settings   |          |                | Select which graphics controller to use as the primary boot device. |                   |          |      |
| <b>Initiate Graphic Adapter</b>                          |          | <b>[IGD]</b>   |   | ← Select Screen   |          |      |
| Internal Graphics Mode Select                            |          | [Enabled, 8MB] |   | ↑↓ Select Item    |          |      |
| Hyper Threading Technology                               |          | [Enabled]      |   | +- Change Option  |          |      |
|  |          |                |   | F1 General Help   |          |      |
|  |          |                |   | F10 Save and Exit |          |      |
|  |          |                |   | ESC Exit          |          |      |
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### Initiate Graphic Adapter

Options: IGD, PCI/IGD, PCI/PEG, PEG/IGD, PEG/PCI

### Internal Graphics Mode Select

Select the amount of system memory used by the Internal graphics device.

Options: Enabled 1MB, Enabled 8M

### Hyper Threading Technology

Options: Disabled, Enabled

Table 11 Video Function Configuration

| BIOS SETUP UTILITY                                       |          |                    |         |                   |          |      |
|--|----------|--------------------|---------|-------------------|----------|------|
| Main   | Advanced | Boot               | Chipset | Power             | Security | Exit |
| Video Function Configuration                             |          |                    |         | Options           |          |      |
| <b>VVMT Mode Select</b>                                  |          | <b>[DVMT Mode]</b> |         | Fixed Mode        |          |      |
| DVMT/FIXED memory  |          | [256MB]            |         | DVMT Mode         |          |      |
| Boot Display Device                                      |          | [VGA]              |         | ← Select Screen   |          |      |
|  |          |                    |         | ↑↓ Select Item    |          |      |
|  |          |                    |         | +- Change Option  |          |      |
|  |          |                    |         | F1 General Help   |          |      |
|  |          |                    |         | F10 Save and Exit |          |      |
|  |          |                    |         | ESC Exit          |          |      |
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**DVMT Mode Select**

Options: Fixed Mode, DVMT Mode

**DVMT/FIXED Memory**

Options: 128MB, 256MB, Maximum DVMT

**Boot Display Device**

Options: VGA

# Power Menu

Table 12 Power Menu

| BIOS SETUP UTILITY                                      |          |      |                  |   |          |  |
|---|----------|------|------------------|---|----------|--|
| Main  | Advanced | Boot | Chipset          | <b>Power</b>                                      | Security | Exit   |
| Power Management Settings                               |          |      |                  | Enable/Disable ACPI support for Operating System. |          |  |
| <b>ACPI Function</b>                                    |          |      | <b>[Enabled]</b> |   |          | ENABLE: If OS supports ACPI.<br><br>DISABLE: If OS does not support ACPI.<br><br>← Select Screen<br>↑↓ Select Item<br>+- Change Option<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |
| Suspend mode  |          |      | [S1 (STR)]       |   |          |  |
| Repost Video on S3 Resume                               |          |      | [No]             |   |          |  |
| Restore on AC Power Loss                                |          |      | [Power Off]      |   |          |  |
| Resume From S3 By USB Device                            |          |      | [Disabled]       |   |          |  |
| Resume By PCI-E Device                                  |          |      | [Disabled]       |   |          |  |
| Resume On RTC Alarm                                     |          |      | [Disabled]       |   |          |  |
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## ACPI Function

Enable/ Disable ACPI support for Operating System.

ENABLE: If OS supports ACPI, DISABLE: IF OS Does not support ACPI.

## Suspend mode

Options: S1 (POS), S3 (STR)

## Repost Video on S3 Resume

Determines whether to invoke VGA BIOS post on S3/STR resume

Options: No, Yes

## Restore on AC Power Loss

Options: Power OFF, Power ON, Last State

## Resume From S3 By USB Device

Options: Disabled, Enabled

## Resume By PCI-E Device

Options: Disabled, Enabled

## Resume On RTC Alarm

Options: Disabled, Enabled

## ■ Security Menu

Table 13 Security Menu

| BIOS SETUP UTILITY   |          |      |         |       |  |      |
|--|----------|------|---------|-------|--|------|
| Main   | Advanced | Boot | Chipset | Power | Security   | Exit |
| <b>Security Setting</b><br><hr/> Supervisor Password :Not Installed<br>User Password :Not Installed<br><br><b>Change Supervisor Password</b><br>Change User Password |          |      |         |       | Install or Change the password.<br><br><br><br>← Select Screen<br>↑↓ Select Item<br>Enter Change<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |      |
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### Change Supervisor Password

Select this item to set or change the supervisor password. The Supervisor Password item on top of the screen displays the default Not Installed. After you have set a password, this item displays Installed.

### Change User Password

Select this item to set or change the user password. The User Password item on top of the screen displays the default Not Installed. After you have set a password, this item displays Installed.

## ■ Exit Menu

Table 14 Exit Menu

| BIOS SETUP UTILITY                                       |          |      |         |       |   |      |
|--|----------|------|---------|-------|---|------|
| Main   | Advanced | Boot | Chipset | Power | Security                                    | Exit |
| Exit Setting   |          |      |         |       | Exit System Setup after saving the changes. |      |
| <b>Save Changes and Exit</b>                             |          |      |         |       | F10 key can be used for this operation.     |      |
| Discard Changes and Exit                                 |          |      |         |       | ← Select Screen                             |      |
| Discard Changes  |          |      |         |       | ↑↓ Select Item                              |      |
| Load Optimal Defaults                                    |          |      |         |       | Enter Go To Sub Screen                      |      |
| Load Failsafe Defaults                                   |          |      |         |       | F1 General Help                             |      |
|  |          |      |         |       | F10 Save and Exit                           |      |
|  |          |      |         |       | ESC Exit                                    |      |
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### Save Changes and Exit

Exit system setup after saving the changes. Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved to the CMOS RAM. The CMOS RAM is sustained by an onboard backup battery and stays on even when the PC is turned off. When you select this option, a confirmation window appears. Select [Yes] to save changes and exit.

### Discard Changes and Exit

Exit system setup without saving any changes. Select this option only if you do not want to save the changes that you made to the Setup program. If you made changes to fields other than system date, system time, and password, the BIOS ask for a confirmation before exiting.

### Discard Changes

Discards changes done so far to any of the setup values. This option allows you to discard the selections you made and restore the previously saved values. After selecting this option, a confirmation appears. Select [Yes] to discard any changes and load the previously saved values.

### Load Optimal Defaults

Load Optimal Default values for all the setup values. This option allows you to load

optimal default values for each of the parameters on the Setup menus, which will provide the best performance settings for your system. The F9 key can be used for this operation.

### **Load Failsafe Defaults**

Load Optimal Default values for all the setup values. This option allows you to load failsafe default values for each of the parameters on the Setup menus, which will provide the most stable performance settings. The F8 key can be used for this operation.

## Chapter 4

# Driver Installation

If your QBOX-1300 does not come with an operating system pre-installed, you will need to install an operating system and the necessary drivers to operate it. After you have finished assembling your system and connected the appropriate power source, power it up using the power supply and install the desired operating system. You can download the drivers for the QBOX-1300 from the Quanmax website at [www.quanmax.com](http://www.quanmax.com) and install as instructed there. For other operating systems, please contact Quanmax.