

# KPC-15A0/17A0

15" / 17" Panel PC w/  
2nd Generation Intel® core i3/ i5/ i7 processors

## User's Guide



**Contact Info:**                   **Quanmax Inc.**  
**5F, No. 415, Ti-Ding Blvd. Sec. 2, NeiHu District,**  
**Taipei, Taiwan 114**  
**Tel: +886-2-2799-2789**  
**Fax: +886-2-2799-7399**

**Visit our site at:**           **[www.quanmax.com](http://www.quanmax.com)**

© 2012 Quanmax Inc. All rights reserved.

The information in this user's guide is provided for reference only. Quanmax does not assume any liability arising out of the application or use of the information or products described herein. This user's guide may contain or reference information and products protected by copyrights or patents and does not convey any license under the patent rights of Quanmax, nor the rights of others. Quanmax is a registered trademark of Quanmax. All trademarks, registered trademarks, and trade names used in this user's guide are the property of their respective owners. All rights reserved. This user's guide contains information proprietary to Quanmax. Customers may reprint and use this user's guide in other publications. Customers may alter this user's guide and publish it only after they remove the Quanmax name, cover, and logo. 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	2012/04/25	Betsy	Initial Release



# Content

Content.....	3
Figures & Tables.....	4
Safety Instructions.....	6
Before You Begin .....	6
When Working Inside a Computer .....	7
Preventing Electrostatic Discharge .....	8
Instructions for Lithium Battery .....	8
Preface.....	9
How to Use This Guide .....	9
Unpacking.....	9
Regulatory Compliance Statements.....	9
Warranty Policy.....	10
Maintaining Your Computer.....	11
Chapter 1 Introduction .....	14
Overview.....	14
Product Specifications .....	15
System tour.....	16
Mechanical Dimensions .....	18
Chapter 2 Getting Started .....	20
Setting up your PC.....	20
VESA Mounting.....	25
Panel Mounting.....	26
Chapter 3 AMI BIOS Setup.....	28
Overview.....	28
Main Menu .....	29
Advanced Menu.....	31
Boot Menu .....	44
Security Menu.....	45
Save & Exit Menu .....	45
Chapter 4 Driver Installation .....	47

## Figures & Tables

Figure 1 I/Os .....	16
Figure 2 KPC-15A0 Mechanical Dimensions .....	18
Figure 3 KPC-17A0 Mechanical Dimensions .....	19
Figure 4 DP/ VGA/ HDMI .....	20
Figure 5 Connect USB mouse & keyboard .....	21
Figure 6 RJ45 connector.....	21
Figure 7 COM ports .....	22
Figure 8 DIO port.....	23
Figure 9 Turning on the system .....	24
Figure 10 VESA Mounting Hole Locations .....	25
Figure 11 KPC-15A0 Panel Mount Cut-out hole and maximum panel thickness.....	26
Figure 12 KPC-17A0 Panel Mount Cut-out hole and maximum panel thickness.....	26
Figure 13 Panel Mounting.....	27
Table 1 KPC-15A0/17A0 product specification.....	15
Table 2 KPC-15A0 BIOS Main Menu .....	29
Table 3 KPC-17A0 BIOS Main Menu .....	30
Table 4 Advanced Menu.....	31
Table 5 Advanced Menu – KPC-15A0 Display Configuration.....	32
Table 6 Advanced Menu – KPC-17A0 Display Configuration.....	33
Table 7 Advanced Menu – Super IO Configuration .....	34
Table 8 Advanced Menu – Super IO Configuration – Serial Port 1 Configuration .....	34
Table 9 Advanced Menu – Super IO Configuration – Serial Port 2 Configuration .....	35
Table 10 Advanced Menu –Power Management Configuration.....	36
Table 11 Advanced Menu –CPU Advanced Configuration.....	37
Table 12 Advanced Menu –Trusted Computing .....	38
Table 13 Advanced Menu –SATA Configuration.....	39
Table 14 Advanced Menu –Intel TXT (LT) Configuration.....	39
Table 15 Advanced Menu – AMT Configuration .....	40

## Figures & Tables

Table 16 Advanced Menu –USB Configuration .....	42
Table 17 Advanced Menu –H/W Monitor .....	43
Table 18 Boot Menu .....	44
Table 19 Security Menu .....	45
Table 20 Save & Exit Menu .....	45

# 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.

---

### 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.

---

### ■ 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.

---

#### CAUTION



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

---

### ■ 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



#### WARNING

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

---

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)

# 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.

---

### NOTE



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

---

## ■ 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.

---

### 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.

---

## ■ 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 KPC-15A0/17A0 Panel PCs are combining with the high integration of the Intel<sup>®</sup> QM67/ HM65 Express chipset. Featured are DDR3 1066/1333 MHz memory support up to 8GB, includes a 2.5" SATA hard drive or a solid-state drive (SSD). Supported interfaces include 2x GbE LAN, 4x USB 2.0 ports, 2x COM ports, 1x DIO, 1x HDMI, 1x DP, 1xVGA, 1xMini-PCIe slot thus easily meeting a broad range of customer requirements.

The KPC series provide a compact, high performance human-machine interface, with optimal shock, vibration and temperature resistance for tough industrial demands.

### Checklist

- KPC-15A0/17A0
- Power Cord (Optional : Power Adapter )
- Driver CD
- Quick installation Guide
- Optional VESA Mounting Kit
- Optional wireless LAN
- 1x Panel Mounting Kit (with screw bag)

### Features

- 2nd Generation Intel<sup>®</sup> core i3/ i5/i7 processors
- Intel<sup>®</sup> QM67/HM65 Express Chipset
- Intel<sup>®</sup> HD Graphics 3000 processor graphics
- DDR3 1066/1333 MHz memory support up to 8GB
- 1x HDMI, 1x DP, 1X VGA
- 4x USB2.0, 2x COM, 1x DIO, 2x GbE LAN
- 1x Mini-PCIe slot supported

## ■ Product Specifications

CPU Support	Intel® 2nd Generation Intel® core i3/ i5/i7 processors	
Chipset	Intel® QM67/ HM65 Express chipset	
Memory	1x DDR3 1066/ 1333 MHz SODIMM support (8GB max)	
BIOS	AMI Plug & Play SPI BIOS	
Graphic	Intel® HD Graphics 3000 processor graphics	
LCD Display	KPC-15A0	KPC-17A0
Display Size	15 inch, 4:3	17 inch, 5:4
Resolution	1024 x 768	1280 x 1024
Backlight	LED	LED
Contrast Ratio	600:1 (typical)	1000:1 (typical)
Brightness	350cd/m <sup>2</sup> (typical)	350cd/m <sup>2</sup> (typical)
Touch Sensor	5-wire resistive touch sensor	
External Display	1x HDMI, 1x Display Port , 1x VGA	
LAN	2x Gigabit Ethernet (Realtek RTL8111E) PXE/WOL supported	
Audio	Realtek ALC662 HD Codec w/ 2W Audio Amplifier Mic-In, Line-In, Line-Out Supported	
Storage	1x 2.5" SATA HDD or SSD space	
USB	4 x USB 2.0	
COM	2x COM ports with RS-232/422/485 selection supported	
DIO	1x 8-bits programmable DIO ( 4-DI/4-DO )	
Expansion slot	1x Mini-PCIe slot	
Hardware Monitor	Operating voltage, CPU temperature	
Watchdog Timer	1-255 step, can be set with software on Super I/O	
Power	AC 100-240V(Optional DC-12V or DC-24V)	
OS Support	Windows 7	
Dimensions	KPC-15A0	KPC-17A0
	410mm x 315 mm x 82.46mm (WxDxH)	442mm x 354 mm x 93.44mm (WxDxH)
Environment	Operation Temp: 0°C to 60°C (CF, SSD), 0°C to 50°C (2.5" HDD) Storage Temp: 0°C to 70°C, 10%-85% rel. hum., non-condensing Humidity: 0% - 95%	
Certification	CE, FCC Class A	

Table 1 KPC-15A0/17A0 product specification

## ■ System tour

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

### ■ I/Os

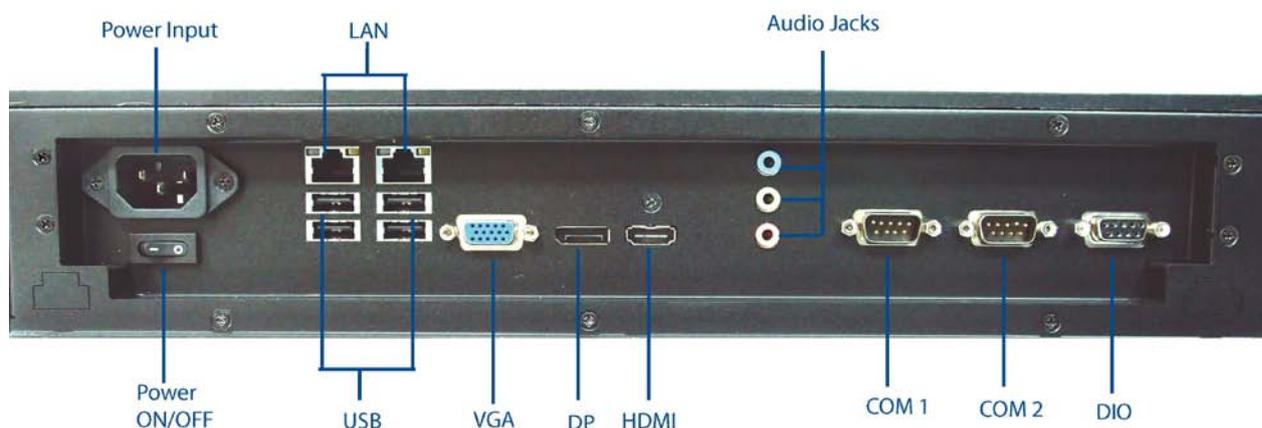


Figure 1 I/Os

#### Power Input

1. Connect the supplied AC power cord to the system AC power inlet on the I/O panel of the system.
2. Connect the other end of the AC power cord to a corresponding outlet.

#### Power Switch

The power switch allows powering ON and OFF the system.

#### Ethernet

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

#### 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

### **DP**

DP is a display interface used to connect a video source to a display device such as a computer monitor or a television set.

### **HDMI**

HDMI connector for display output

### **Line Out (Green)**

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

### **MIC-IN (Pink)**

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

### **Line-IN (Blue)**

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

### **COM**

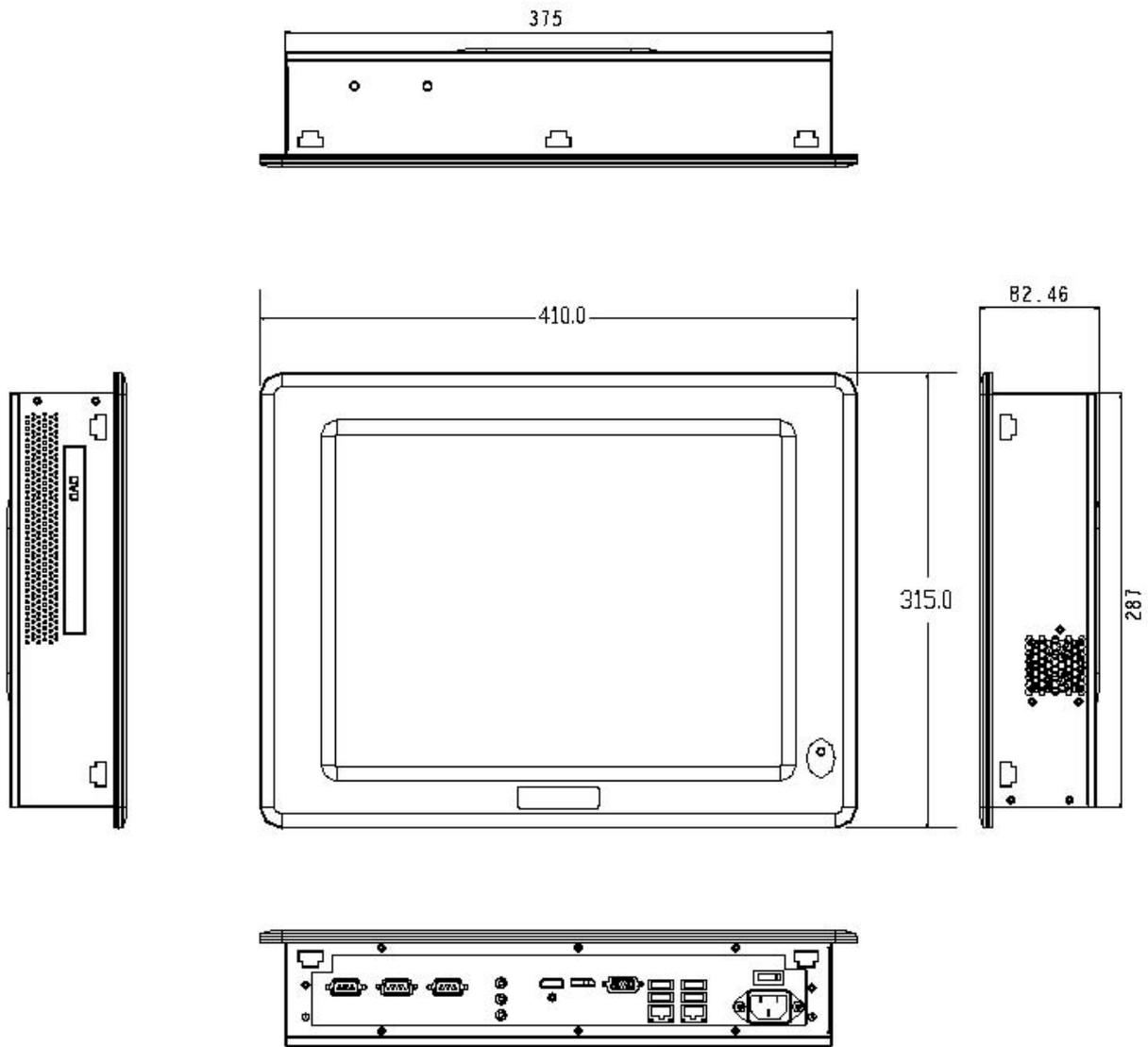
D-Sub 9 pin connector for RS-232/422/485 connection

### **Digital I/O**

This interface used to connect digital signals for input and output purposes.

# Mechanical Dimensions

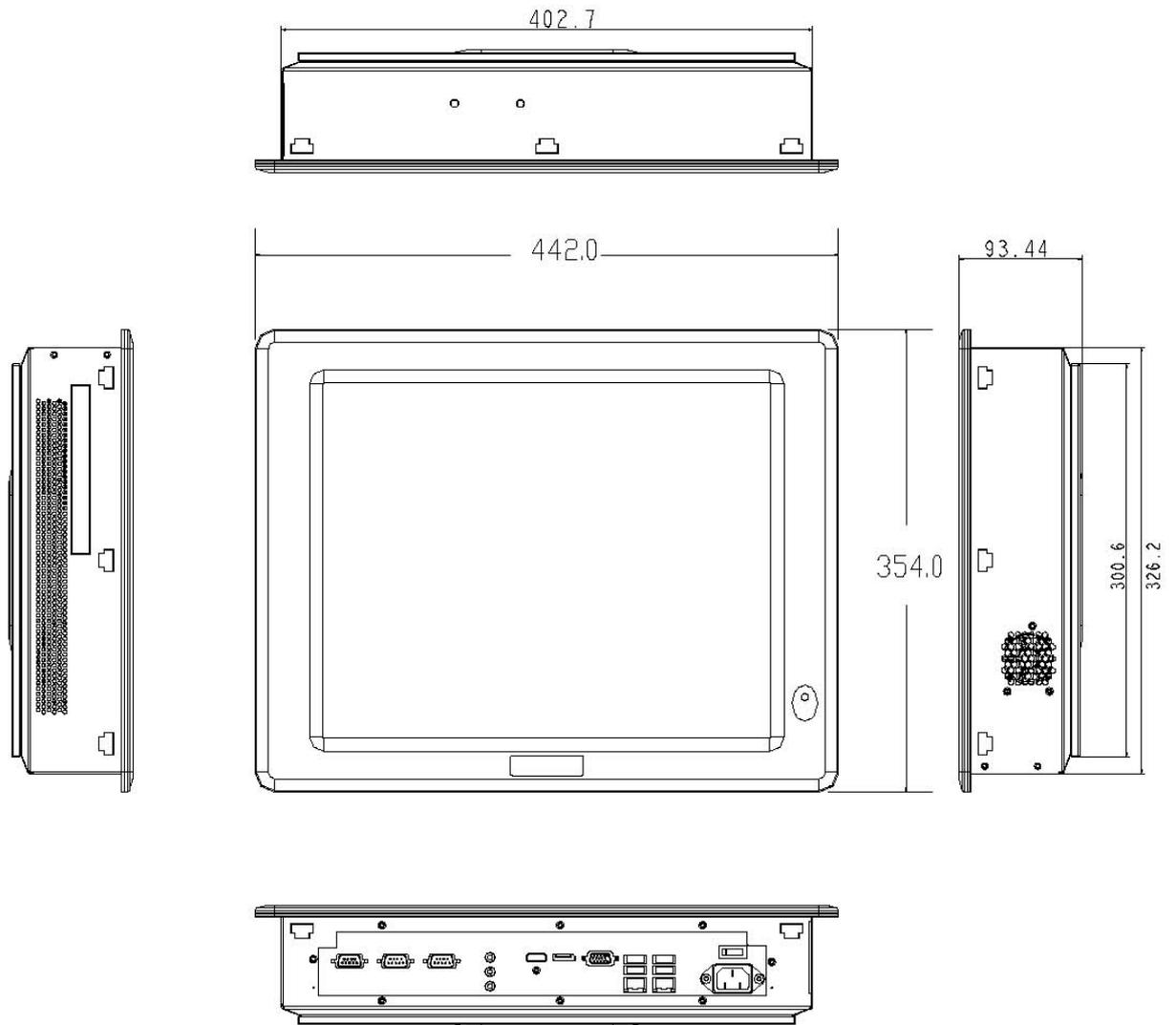
## KPC-15A0



410 x 315 x 82.46 mm (W x D x H)

Figure 2 KPC-15A0 Mechanical Dimensions

KPC-17A0



442 x 354 x 93.44 mm (W x D x H)

Figure 3 KPC-17A0 Mechanical Dimensions

## Chapter 2

# Getting Started

### ■ Setting up your PC

#### ■ Connecting the monitor

Connect the DP/ VGA/ HDMI cable from your display to the DP/ VGA/ HDMI port.

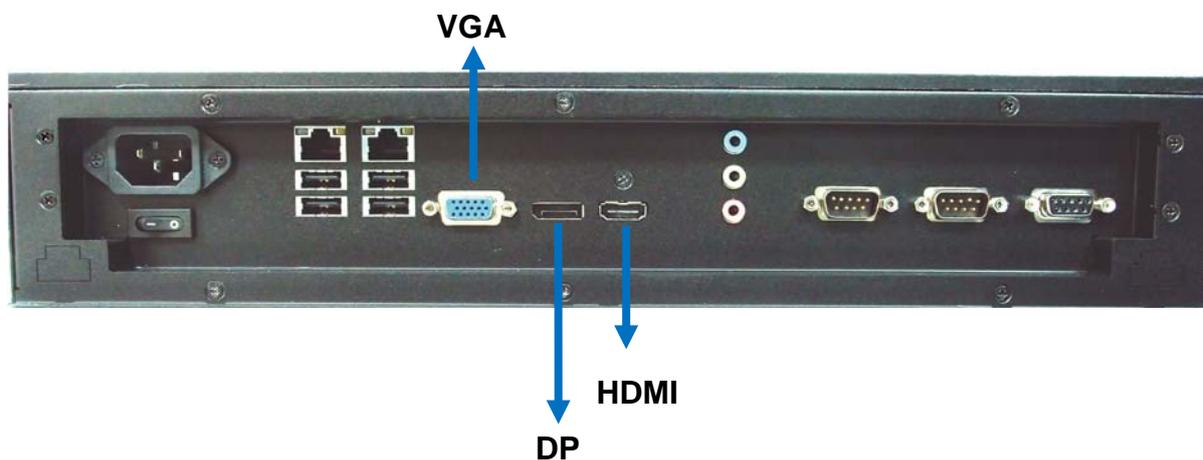


Figure 4 DP/ VGA/ HDMI

### ■ Connecting USB mouse & keyboard

Your KPC-15A0/17A0 does not come with a keyboard and mouse, but you can use any USB keyboard or mouse with your computer.



Figure 5 Connect 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.



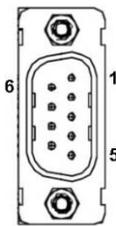
Figure 6 RJ45 connector

■ **COM ports**

COM ports with the pin definitions.

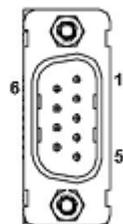


COM1 RS-232 / 422 / 485 Port DB-9



Pin	RS-232	RS-422	Half Duplex RS-485	Full Duplex RS-485
1	DCD	TX-	DATA-	TX-
2	RXD	RX+	N/A	RX+
3	TXD	TX+	DATA+	TX+
4	DTR	RX-	N/A	RX-
5	GND	GND	GND	GND
6	DSR	N/A	N/A	N/A
7	RTS	N/A	N/A	N/A
8	CTS	N/A	N/A	N/A
9	+5V	+5V	+5V	+5V

COM2 RS-232 Port 2 Wafer

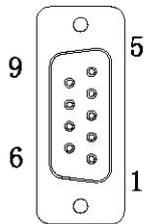


Pin	Signal
1	DCD, Data carrier detect
2	RXD, Receive data
3	TXD, Transmit data
4	DTR, Data terminal ready
5	GND, ground
6	DSR, Data set ready
7	RTS, Request to send
8	CTS, Clear to send
9	+5V

Figure 7 COM ports

■ **DIO port**

DIO port with the pin definitions.



Pin	Signal	Pin	Signal
1	Digital Output 0	2	Digital Input 0
3	Digital Output 1	4	Digital Input 1
5	Digital Output 2	6	Digital Input 2
7	Digital Output 3	8	Digital Input 3
9	+5V		

Figure 8 DIO port

■ **Turning on the system**

1. Connect the supplied AC power cord to the system AC power inlet on the I/O panel of the system.
2. Connect the other end of the AC power cord to a corresponding outlet.
3. Press the power switch on the front panel to turn on the system



Figure 9 Turning on the system

## ■ VESA Mounting

The product comes with VESA FDMI 75/100 standard mounting holes as shown below. Use 4 screws with the appropriate length for your mounting bracket.

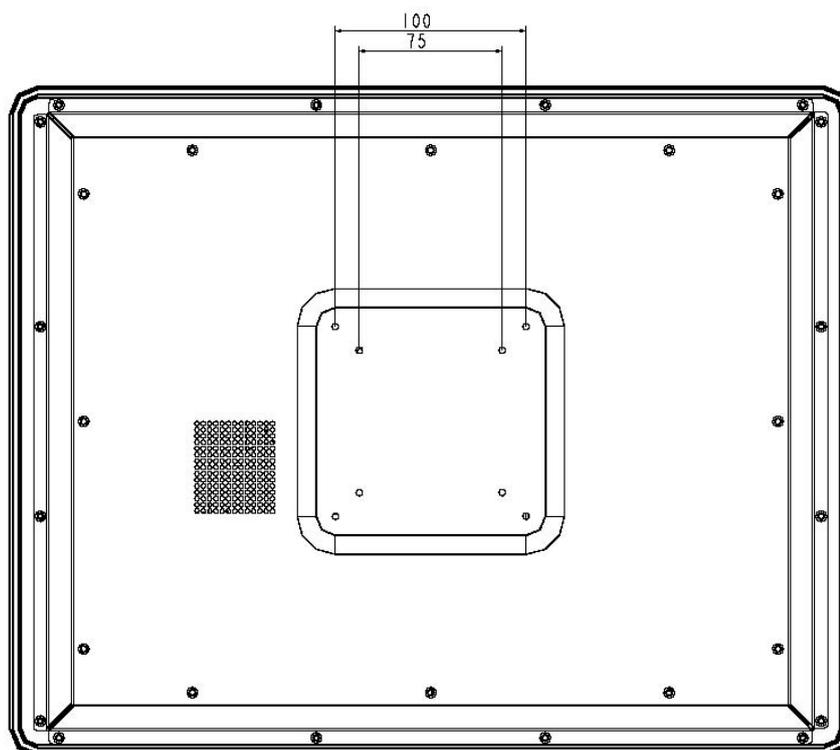


Figure 10 VESA Mounting Hole Locations

---

### NOTE



To fasten the metal shelf, your monitor must comply with VESA75 or VESA100 standard. The VESA mounting kit is optional.

---

## ■ Panel Mounting

The Panel PC can be panel mounted and comes with brackets and screws for this purpose. The required cutout for panel mounting and maximum panel thickness is shown below.

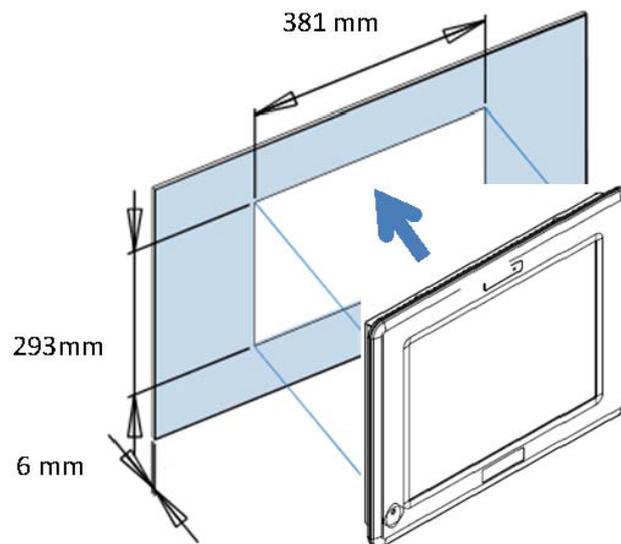


Figure 11 KPC-15A0 Panel Mount Cut-out hole and maximum panel thickness

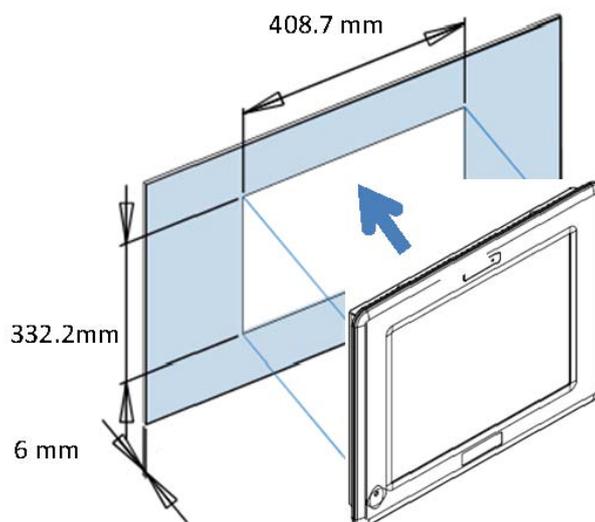
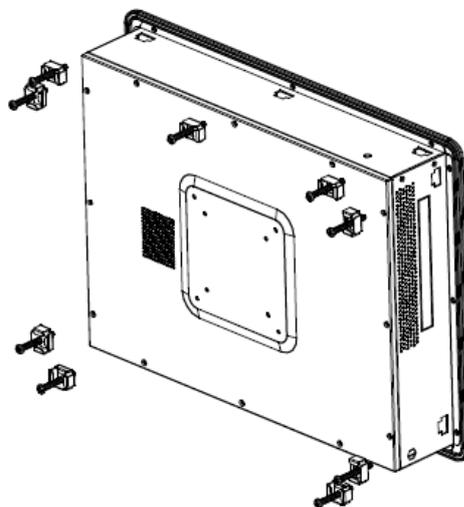


Figure 12 KPC-17A0 Panel Mount Cut-out hole and maximum panel thickness

Below are the demonstrations of how to do panel mounting.

**Step1**

Tightening the screws as shown right.



**Step2**

Done

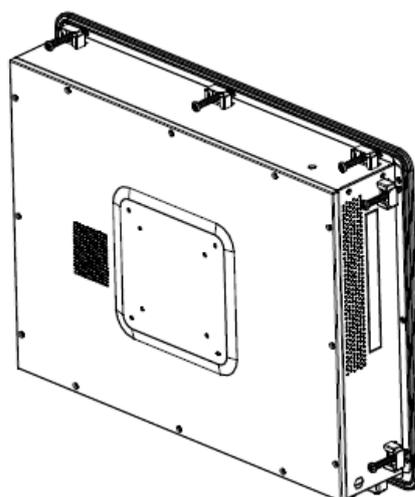


Figure 13 Panel Mounting

## 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 KPC-15A0 BIOS Main Menu

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
BIOS Information				
Product Name		KPC-15A0		
Version		1.01		
Build Date		03/29/2012		
CPU Information Intel® Core™ i7-2630QM CPU@2.00GHz				→ ← Select Screen
Microcode Revision		28		↑↓ Select Item
Processor Cores		4		Enter: Select
Memory Information				+ - Change Opt.
Total Size		1024 MB (DDR3)		F1: General Help
Frequency		1067 MHz		F2: Previous Values
System date		[Wed 03/28/2012]		F3: Optimized Defaults
System time		[04:38:37]		F4 Save & Exit
				ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

Table 3 KPC-17A0 BIOS Main Menu

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
BIOS Information				
Product Name		KPC-17A0		
Version		1.01		
Build Date		03/29/2012		
CPU Information				→ ← Select Screen
Intel® Core™ i7-2630QM CPU@2.00GHz				↑↓ Select Item
Microcode Revision		28		Enter: Select
Processor Cores		4		+ - Change Opt.
Memory Information				F1: General Help
Total Size		1024 MB (DDR3)		F2: Previous Values
Frequency		1067 MHz		F3: Optimized Defaults
System date		[Wed 03/28/2012]		F4 Save & Exit
System time		[04:38:37]		ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

## ■ Advanced Menu

Table 4 Advanced Menu

BIOS SETUP UTILITY		
Main	<b>Advanced</b>	Boot Security Server Mgmt Save & Exit
Onboard LAN1 Controller	[Enabled]	
Onboard LAN1 Boot	[Disabled]	
Onboard LAN2 Controller	[Enabled]	
Onboard LAN2 Boot	[Disabled]	
Audio Controller	[Enabled]	→ ← Select Screen
> Display Configuration		↑↓ Select Item
> Super IO Configuration		Enter: Select
> Power Management Configuration		+ - Change Opt.
> CPU Advanced Configuration		F1: General Help
> Trusted Computing		F2: Previous Values
> SATA Configuration		F3: Optimized Defaults
> Intel TXT (LT) Configuration		F4 Save & Exit
> AMT Configuration		ESC Exit
> USB Configuration		
> H/W Monitor		
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.		

### Onboard LAN 1 Controller

Options: Disabled, Enabled

### Onboard LAN 1 Boot

Options: Disabled, Enabled

### Onboard LAN 2 Controller

Options: Disabled, Enabled

### Onboard LAN 2 Boot

Options: Disabled, Enabled

### Audio Controller

Options: Disabled, Enabled, Auto

Table 5 Advanced Menu – KPC-15A0 Display Configuration

BIOS SETUP UTILITY		
Main	<b>Advanced</b>	Boot Security Server Mgmt Save & Exit
Display Configuration		
Primary Display	[IGFX]	→ ← Select Screen
Internal Graphics	[Enabled]	↑↓ Select Item
Aperture Size	[256 MB]	Enter: Select
DVMT Pre-Allocated	[64 MB]	+ - Change Opt.
DVMT Total Gfx Mem	[256 MB]	F1: General Help
IGFX – Boot Type	[ LVDS 1 ]	F2: Previous Values
IGFX-2nd Boot Type	[CRT]	F3: Optimized Defaults
Active LVDS 1	[Enabled]	F4 Save & Exit
LVDS 1 Panel Type	[1024X768 LVDS ]	ESC Exit
LVDS 1 Panel Color Depth	[18 Bit ]	
LVDS 1 Backlight Control – Voltage	[2.5V]	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.		

**Aperture Size**

Options: 128MB, 256MB, 512MB

**DVMT Pre-Allocated**

Options: 0M, 32 M, 64 M, 96 M, 128MB, 160 M, 192 M, 224 M, 256MB, 288 M, 320 M , 352 M , 384 M , 416 M , 448 M , 480 M , 512M

**DVMT Total Gfx Mem**

Options: 128MB, 256MB, MAX

**LVDS 1 Backlight Control – Voltage**

Options: 0.0V, 0.5V, 1.0V, 1.5V, 2.0V, 2.5V, 3.0V, 3.5V, 4.0V, 4.5V, 5.0V

Table 6 Advanced Menu – KPC-17A0 Display Configuration

BIOS SETUP UTILITY		
Main	<b>Advanced</b>	Boot Security Server Mgmt Save & Exit
Display Configuration		
Primary Display	[IGFX]	→ ← Select Screen
Internal Graphics	[Enabled]	↑↓ Select Item
Aperture Size	[256 MB]	Enter: Select
DVMT Pre-Allocated	[64 MB]	+ - Change Opt.
DVMT Total Gfx Mem	[256 MB]	F1: General Help
IGFX – Boot Type	[ LVDS 1 ]	F2: Previous Values
IGFX-2nd Boot Type	[CRT]	F3: Optimized Defaults
Active LVDS 1	[Enabled]	F4 Save & Exit
LVDS 1 Panel Type	[1280X 1024 24Bit 2CH ]	ESC Exit
LVDS 1 Panel Color Depth	[24 Bit ]	
LVDS 1 Backlight Control – Voltage	[2.5V]	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.		

**Aperture Size**

Options: 128MB, 256MB, 512MB

**DVMT Pre-Allocated**

Options: 0M, 32 M, 64 M, 96 M, 128MB, 160 M, 192 M, 224 M, 256MB, 288 M, 320 M , 352 M , 384 M , 416 M , 448 M , 480 M , 512M

**DVMT Total Gfx Mem**

Options: 128MB, 256MB, MAX

**LVDS 1 Backlight Control – Voltage**

Options: 0.0V, 0.5V, 1.0V, 1.5V, 2.0V, 2.5V, 3.0V, 3.5V, 4.0V, 4.5V, 5.0V

Table 7 Advanced Menu – Super IO Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Super IO Configuration			→ ← Select Screen	
>Serial Port 1 Configuration			↑↓ Select Item	
>Serial Port 2 Configuration			Enter: Select	
			+- Change Opt.	
			F1: General Help	
			F2: Previous Values	
			F3: Optimized Defaults	
			F4 Save & Exit	
			ESC Exit	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

Table 8 Advanced Menu – Super IO Configuration – Serial Port 1 Configuration

BIOS SETUP UTILITY						
Main	Advanced	Boot	Chipset	Power	Security	Exit
Serial Port 1 Configuration					→←: Select Screen	
Serial Port					↑↓: Select Item	
Device Settings					Enter: Select	
Change Settings					+/-: Change Opt.	
Serial Port 1 Type					F1: General Help	
					F2: Previous Values	
					F3: Optimized Defaults	
					F4: Save and Exit	
					ESC: Exit	
Version 2.10.1208 Copyright (C) 2010 American Megatrends, Inc.						

**Serial Port**

Options: Disabled, Enabled

**Change Settings**

Options: Auto,

IO=3F8h; IRQ=4;

IO=3F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

**Serial Port 1 Type**

Options: RS232, RS422, RS485

Table 9 Advanced Menu – Super IO Configuration – Serial Port 2 Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Serial Port 2 Configuration				
Serial Port Device Settings		[Enabled] IO=2F8h; IRQ=3;		
Change Settings Device Mode		[Auto] [ Standard Serial Po...]		
				→ ← Select Screen ↑↓ Select Item Enter: Select +- Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4 Save & Exit ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**Serial Port**

Options: Disabled, Enabled

**Change Settings**

Options: Auto,

IO=2F8h; IRQ=3;

IO=3F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12

**Device Mode**

Options: Standard Serial Port Mode,

IrDA functions, active pulse is 1.6us,

IrDA function, active pulse is 3/16 bit time.

Table 10 Advanced Menu –Power Management Configuration

BIOS SETUP UTILITY		
Main	<b>Advanced</b>	Boot Security Server Mgmt Save & Exit
Power Management Configuration		
ACPI Sleep State	[S3 (Suspend to RAM)]	→ ← Select Screen
Restore AC Power Loss	[Power Off]	↑↓ Select Item
Resume from S3 By PS/2 Keyboard	[Disabled]	Enter: Select
Resume from S3 By PS/2 Mouse	[Disabled]	+ - Change Opt.
Resume By PCIE Device	[Disabled]	F1: General Help
Resume By RTC Alarm	[Disabled]	F2: Previous Values
EUP Power Saving Mode	[Disabled]	F3: Optimized Defaults
>Watchdog Timer Configuration		F4 Save & Exit
		ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.		

**ACPI Sleep State**

Options: Suspend Disabled, S1 (CPU Stop Clock), S3 (Suspend to RAM)

**Restore AC Power Loss**

Options: Power Off, Power On, Last State

**Resume from S3 By PS/2 Keyboard**

Options: Disabled, Enabled

**Resume from S3 By PS/2 Mouse**

Options: Disabled, Enabled

**Resume By PCIE Device**

Options: Disabled, Enabled

**Resume By RTC Alarm**

Options: Disabled, Enabled

**EUP Power Saving Mode**

Options: Disabled, Enabled

**Watchdog Timer Configuration**■ **WDT Function [ Disabled ]**

Options: Disabled, Enabled

Table 11 Advanced Menu –CPU Advanced Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
CPU Advanced Configuration			→ ← Select Screen	
EIST			↑↓ Select Item	
Turbo Mode			Enter: Select	
Intel (R) Virtualization Tech			+- Change Opt.	
Intel (R) Hyper Threading Tech			F1: General Help	
Active Processor Cores			F2: Previous Values	
Limit CPUID Maximum			F3: Optimized Defaults	
Execute Disable Bit			F4 Save & Exit	
			ESC Exit	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**EIST**

Options: Disabled, Enabled

**Turbo Mode**

Options: Disabled, Enabled

**Intel (R) Virtualization Tech**

Options: Disabled, Enabled

**Intel (R) Hyper Threading Tech**

Options: Disabled, Enabled

**Active Processor Cores**

Options: All, 1, 2, 3

**Limit CPUID Maximum**

Options: Disabled, Enabled

**Execute Disable Bit**

Options: Disabled, Enabled

Table 12 Advanced Menu –Trusted Computing

BIOS SETUP UTILITY				
Main	<b>Advanced</b>	Boot	Security	Save & Exit
TPM Configuration TPM Support [Disabled] Current TPM Status Information TPM Support off				→ ← Select Screen ↑↓ Select Item Enter: Select +- Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4 Save & Exit ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**TPM Support**

Options: Disabled, Enabled

Table 13 Advanced Menu –SATA Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
SATA Controller (s)		[Enabled]		→ ← Select Screen
SATA Mode Selection		[ IDE ]		↑↓ Select Item
Serial ATA Port 1		WDC WD1600BEVT (160.0)		Enter: Select
Software Preserve		Supported		+ - Change Opt.
Serial ATA Port 2		Empty		F1: General Help
Software Preserve		unknown		F2: Previous Values
				F3: Optimized Defaults
				F4 Save & Exit
				ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**SATA Controller (s)**

Options: Disabled, Enabled

**SATA Mode Selection**

Options: IDE, AHCI, RAID

Table 14 Advanced Menu –Intel TXT (LT) Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Intel Trusted Execution Technology Configuration				→ ← Select Screen
Intel TXT support only can be enabled/ disabled if SMX enabled.				↑↓ Select Item
And must enables the VT support prior to TXT.				Enter: Select
Secure Mode Extensions (SMX) [Disabled]				+ - Change Opt.
Intel TXT (LT) Support [Disabled]				F1: General Help
				F2: Previous Values
				F3: Optimized Defaults
				F4 Save & Exit
				ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

Table 15 Advanced Menu – AMT Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Intel AMT		[Enabled]		
Intel AMT Setup Prompt		[Enabled]		→ ← Select Screen
BIOS Hotkey Pressed		[Disabled]		↑↓ Select Item
MEBx Selection Screen		[Disabled]		Enter: Select
Verbose Mebx Output		[Enabled]		+ - Change Opt.
Hide Un-configure ME confirmation		[Disabled]		F1: General Help
MEBx Debug Message output		[Disabled]		F2: Previous Values
Un-configure ME		[Disabled]		F3: Optimized Defaults
Intel AMT Password Write Enabled		[Enabled]		F4 Save & Exit
AMT Wait Timer		0		ESC Exit
ASF		[Enabled]		
Activate Remote Assistance Process		[Disabled]		
USB Configure		[Enabled]		
PET Progress		[Enabled]		
Intel AMT SPI Protected		[Disabled]		
AMT CIRA Timeout		0		
WatchDog		[Disabled]		
OS Timer		0		
BIOS Timer		0		
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**Intel AMT**

Options: Disabled, Enabled

**Intel AMT Setup Prompt**

Options: Disabled, Enabled

**BIOS Hotkey Pressed**

Options: Disabled, Enabled

**MEBx Selection Screen**

Options: Disabled, Enabled

**Verbose Mebx Output**

Options: Disabled, Enabled

**Hide Un-configure ME confirmation**

Options: Disabled, Enabled

**MEBx Debug Message output**

Options: Disabled, Enabled

**Un-configure ME**

Options: Disabled, Enabled

**Intel AMT Password Write Enabled**

Options: Disabled, Enabled

**ASF**

Options: Disabled, Enabled

**Activate Remote Assistance Process**

Options: Disabled, Enabled

**USB Configure**

Options: Disabled, Enabled

**PET Progress**

Options: Disabled, Enabled

**Intel AMT SPI Protected**

Options: Disabled, Enabled

**WatchDog**

Options: Disabled, Enabled

Table 16 Advanced Menu –USB Configuration

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
USB Configuration				→ ← Select Screen
USB Devices:				↑↓ Select Item
1 Keyboard, 2 Hubs				Enter: Select
Legacy USB Support		[Enabled]	+- Change Opt.	
EHCI Hand-off		[Disabled]	F1: General Help	
USB hardware delays and time-outs:				F2: Previous Values
USB transfer time-out		[ 20 Sec]	F3: Optimized Defaults	
Device reset time-out		[ 20 Sec]	F4 Save & Exit	
Device Power-up delay		[ Auto]	ESC Exit	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**Legacy USB Support**

Options: Disabled, Enabled, Auto

**EHCI Hand-off**

Options: Disabled, Enabled

**USB transfer time-out**

Options: 1 sec, 5 sec, 10 sec, 20 sec

**Device reset time-out**

Options: 10 sec, 20 sec, 30 sec, 40 sec

**Device Power-up delay**

Options: Auto, Manual

Table 17 Advanced Menu –H/W Monitor

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
PC Health Status				
CPU Warning Temperature		[Disabled]		
CPU Shutdown Temperature		[Disabled]		
CPU Smart FAN		[Enabled]		→ ← Select Screen
CPU Temperature		: +67C		↑↓ Select Item
Total Side system Temperature		: +54C		Enter: Select
Bottom Side System Temperature		: +53C		+ - Change Opt.
CPU Fan Speed		: 6072RPM		F1: General Help
+3.3V		: +3.344 V		F2: Previous Values
+VCORE		: +1.016 V		F3: Optimized Defaults
+VGFX		: +0.448 V		F4 Save & Exit
+1.05V		: +1.056 V		ESC Exit
+1.5V		: +1.493V		
+5VDUAL		: +5.120V		
+12 V		: +11.968 V		
+3.3VSB		: +3.376 V		
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**CPU Warning Temperature**

Options: Disabled, 80 °C, 85 °C, 90 °C, 95 °C

**CPU Shutdown Temperature**

Options: Disabled, 80 °C, 85 °C, 90 °C, 95 °C

## ■ Boot Menu

Table 18 Boot Menu

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Boot Configuration Full Screen LOGO Display [Disabled] Setup Prompt Timeout 1 Bootup NumLock State [On]  Boot Option Priorities Boot Option #1 [SATA: WDC WD1600BE...] Hard Drive BBS Priorities				→ ← Select Screen ↑↓ Select Item Enter: Select +- Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4 Save & Exit ESC Exit
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

### Full Screen LOGO Display

Options: Disabled, Enabled

### Bootup Numlock State

Options: On, Off

### Boot Option #1

Options: SATA : Disabled

### Hard Drive BBS Priorities

#### ■ Boot Option #1

Options: SATA : Disabled

## ■ Security Menu

Table 19 Security Menu

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Password Description  If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup  If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights  The password length must be 3 to 20 characters long.  Administrator Password  User Password  HDD Security Configuration: HDD 0 : WDC WD1600BE...			→ ← Select Screen ↑↓ Select Item Enter: Select +- Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4 Save & Exit ESC Exit	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

## ■ Save & Exit Menu

Table 20 Save &amp; Exit Menu

BIOS SETUP UTILITY				
Main	Advanced	Boot	Security	Save & Exit
Save Changes and Exit Discard Changes and Exit Save Changes and Reset Discard Changes and Reset Save Options Save Changes Discard Changes Restore Defaults Save as User Defaults Restore User Defaults Boot Override SATA: WDC WD1600BEVT-00ZCT0			→ ← Select Screen ↑↓ Select Item Enter: Select +- Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4 Save & Exit ESC Exit	
Version 2.10.1208 Copyright (C) 2010, American Megatrends, Inc.				

**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 asks 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 KPC-15A0/17A0 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 KPC-15A0/17A0 from the Quanmax website at [www.quanmax.com](http://www.quanmax.com) and install as instructed there. For other operating systems, please contact Quanmax.