

# RITY150

**15" XGA Flat Touch Panel PC Intel® Atom™ Processor with  
Intel® NM10 Express Chipset**

## Quick Reference Guide

**1<sup>st</sup> Ed – 16 March 2015**

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## FCC Statement



THIS DEVICE COMPLIES WITH PART 15 FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE 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 WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

## A Message to the Customer

### ***Avalue Customer Services***

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

### ***Technical Support***

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult the user's manual first.

To receive the latest version of the user's manual; please visit our Web site at:

<http://www.avalue.com.tw/>

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# 1. Getting Started

## 1.1 Safety Precautions

### Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

### Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

## 1.2 Packing List

- 1 x RITY Series Panel PC
- 1 x Power Adapter
- 1 x Power Cord
- 1 x Stand (option)



If any of the above items is damaged or missing, contact your retailer.

## 1.3 System Specifications

<b>Panel</b>	
<b>LCD size</b>	15", 4:3
<b>Display Type</b>	XGA
<b>Resolution</b>	1024 x 768
<b>Color</b>	16.2M
<b>Luminance</b>	400cd/m <sup>2</sup>
<b>Contrast ratio</b>	700
<b>Viewing angle</b>	80(H) x 70(V)
<b>Response time</b>	8 ms
<b>Backlight</b>	LED
<b>Touch Type</b>	5 Wires resistive/ PCT
<b>Touch Light Transmission</b>	RES 75 %/ PCT 90%
<b>Touch Controller</b>	Onboard RS232 touch (PenMount)/ USB touch (EETI)
<b>System</b>	
<b>SBC</b>	ACP-CDVPOS
<b>Processor</b>	Intel® Atom™ D2550 Dual-Core 1.8 GHz CPU
<b>System Chipset</b>	Intel® NM10 Express Chipset
<b>I/O Chipset</b>	EC ITE IT8518E
<b>System Memory</b>	1 x 204-Pin DDR3 1066MHz SO-DIMM up to 4 GB
<b>Watchdog Timer</b>	H/W Reset: 1sec.~255min. and 1sec. or 1min./step
<b>Expansion &amp; Storage</b>	
<b>Expansion</b>	1 x Mini PCIe Supports mSATA
<b>Storage</b>	1 x 2.5" Drive Bay 1 x mSATA
<b>I/O</b>	
<b>USB</b>	6 x USB 2.0
<b>COM Port</b>	2 x RS-232/422/485 (BIOS) 1 x RS-232
<b>Display</b>	
<b>Chipset</b>	Intel® Cedarview Integrated Graphics Supports dual display
<b>Resolution</b>	LVDS: Max. resolution 1024x768 @ 60Hz VGA: Max. resolution 1024x768 @ 60Hz

<b>Audio</b>	
<b>Chipset</b>	Realtek ALC892 supports 2-CH
<b>Audio Interface</b>	Line-Out
<b>Speaker Output</b>	2 x 2W
<b>Ethernet</b>	
<b>Chipset</b>	2 x Realtek 8111E
<b>Ethernet Interface</b>	10/100/1000 Base-Tx GbE compatible
<b>LAN Port</b>	1 x RJ-45
<b>Power Requirement</b>	
<b>Power Connector</b>	minidin 4P for DC in w/ lock type
<b>Power Requirement</b>	+19V ~ +24V
<b>Power Type</b>	AT/ATX (ATX is default setting)
<b>Adapter</b>	Input: 100 ~ 240Vac/ 50 ~ 60Hz Output: 90W Adapter (24V @ 3.75A Adapter) AC-DC Adapter
<b>Mechanical &amp; Environmental</b>	
<b>Power Connector</b>	Fanless
<b>Construction - Front</b>	Black Coverlens
<b>Construction - Rear</b>	Black
<b>Dimension</b>	362.1 x 290.08 x 51 mm
<b>Weight</b>	6/with Stand Kgs
<b>Operating Temperature</b>	0°C ~ 35°C (32°F ~ 95°F)
<b>Storage Temperature</b>	0°C ~ 60°C (0°F ~ 140°F)
<b>Operating Humidity</b>	0% ~ 90% Relative Humidity, Non-condensing
<b>Vibration Test</b>	With SSD/mSATA : 1.5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 30min/axis
<b>Shock Test</b>	With SSD : 10Grms, IEC 60068-2-27, Half Sine, 11ms
<b>Certifications &amp; Software Support</b>	
<b>Certification Information</b>	CE FCC Class B

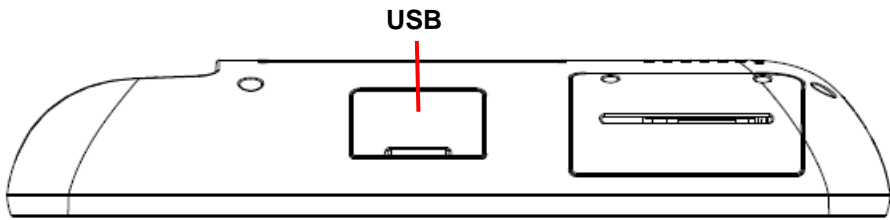
	VCCI
<b>OS Information</b>	POS Ready, Win 7, Win XP



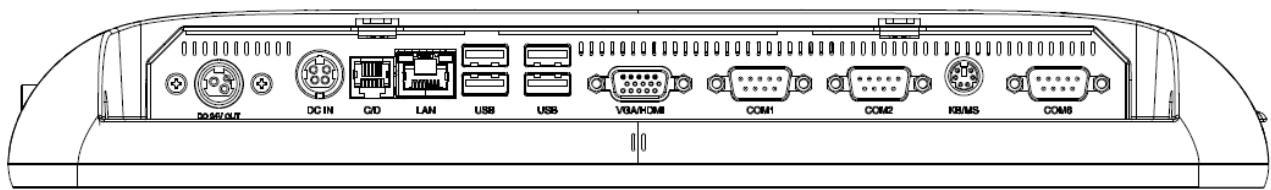
**Note:** Specifications are subject to change without notice.

1.4 System Overview

1.4.1 Right View



1.4.2 Bottom View

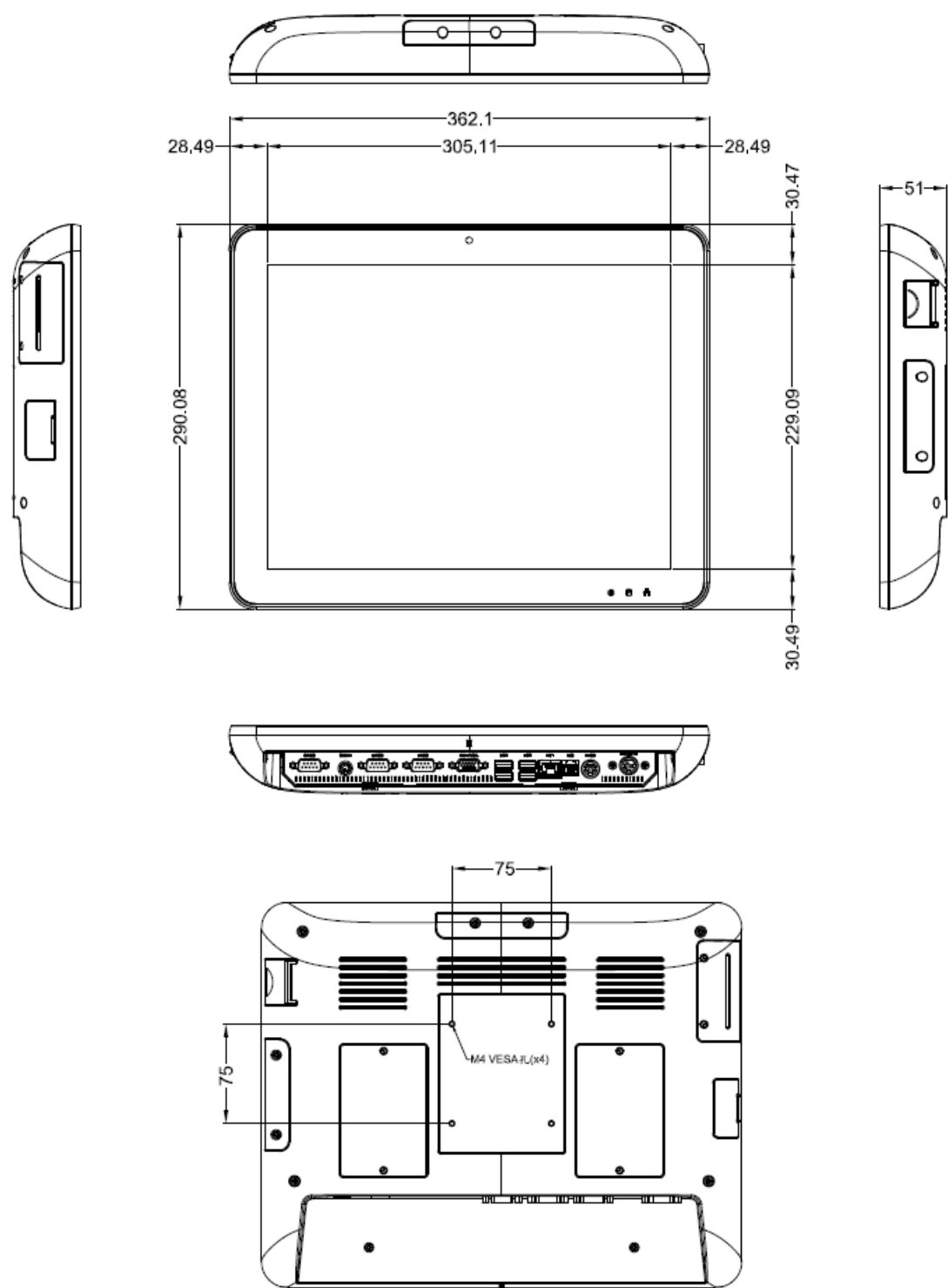


Connectors

Label	Function	Note
COM1/2/6	External Serial Port 1/2 connector (For RS-232/422/485)	DB-9 male connector
	External Serial Port 6 connector (For RS-232)	
VGA/HDMI	VGA connector	
	HDMI connector	
C/D	Cash Drawer connector	
USB	6 x USB 2.0 connector	
LAN	2 x RJ-45 Ethernet connector	
DC-IN	DC Power-in connector	
DC 24V OUT	DC Power-out connector	
KB/MS	Keyboard & Mouse connector	



1.5 System Dimensions



(Unit: mm)

## 2. Hardware Configuration

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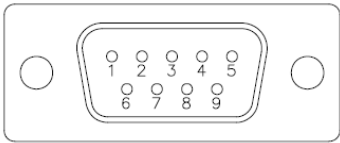
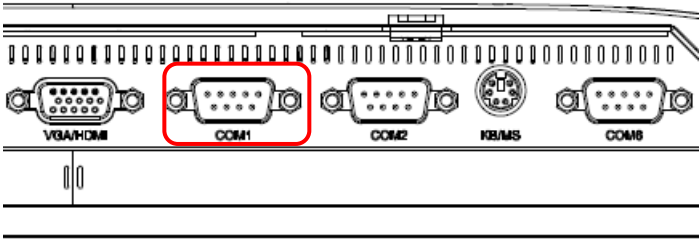


**Note:** If you need more information, please visit our website:

<http://www.avalue.com.tw>

# 2.1 RITY150 connector mapping

## 2.1.1 External Serial Port 1 connector (COM1)



### In RS-232 Mode

Signal	PIN	PIN	Signal
DCDA#	1	6	DSRA#
RXDA	2	7	RTSA#
TXDA	3	8	CTSA#
DTRA#	4	9	RIA#
GND	5		

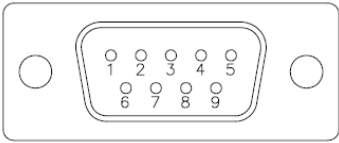
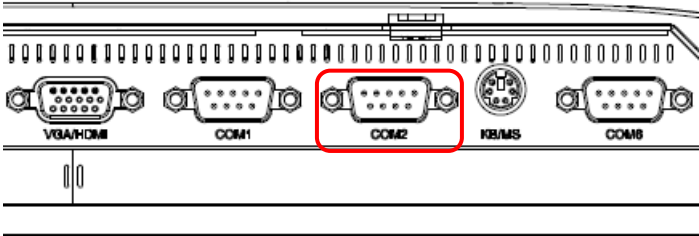
### In RS-422 Mode

Signal	PIN	PIN	Signal
TxD1-	1	6	NC
TxD1+	2	7	NC
RxD1+	3	8	NC
RxD1-	4	9	NC
GND	5		

### In RS-485 Mode

Signal	PIN	PIN	Signal
DATA1-	1	6	NC
DATA1+	2	7	NC
NC	3	8	NC
NC	4	9	NC
GND	5		

2.1.2 External Serial Port 2 connector (COM2)



In RS-232 Mode

Signal	PIN	PIN	Signal
DCDB#	1	6	DSRB#
RXDB	2	7	RTSB#
TXDB	3	8	CTSB#
DTRB#	4	9	RIB#
GND	5		

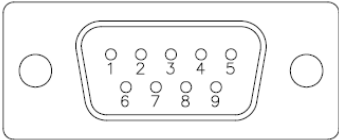
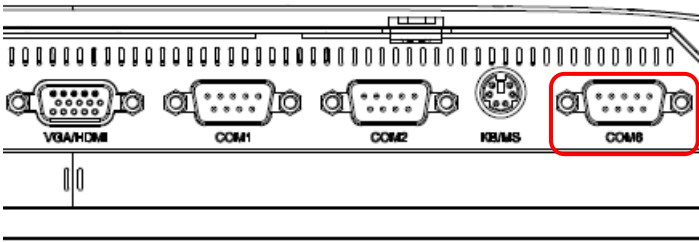
In RS-422 Mode

Signal	PIN	PIN	Signal
TxD1-	1	6	NC
TxD1+	2	7	NC
RxD1+	3	8	NC
RxD1-	4	9	NC
GND	5		

In RS-485 Mode

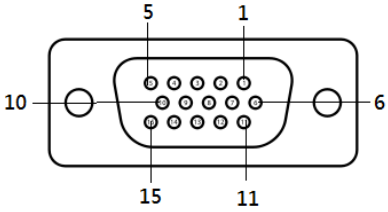
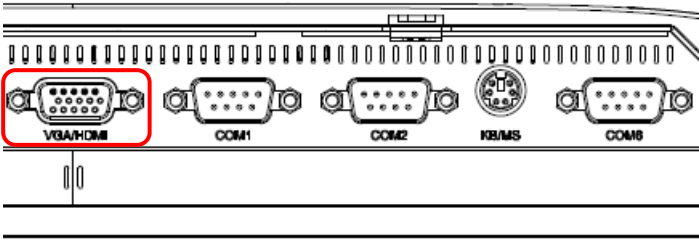
Signal	PIN	PIN	Signal
DATA1-	1	6	NC
DATA1+	2	7	NC
NC	3	8	NC
NC	4	9	NC
GND	5		

2.1.3 External Serial Port 6 connector (COM6)



Signal	PIN	PIN	Signal
DCD	1	6	DSR
RXD	2	7	RTS
TXD	3	8	CTS
DTR	4	9	RI
GND	5		

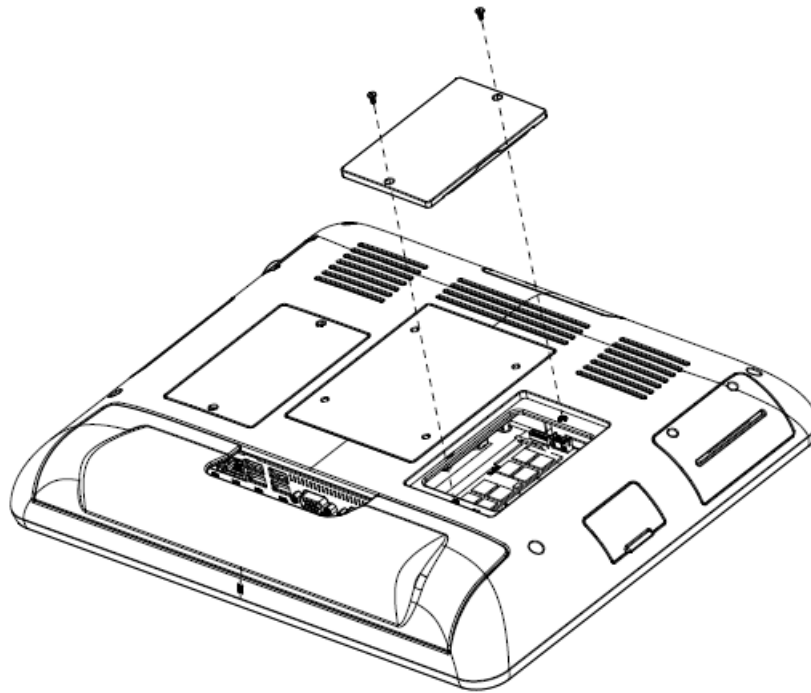
2.1.4 VGA/HDMI connector (VGA/HDMI)



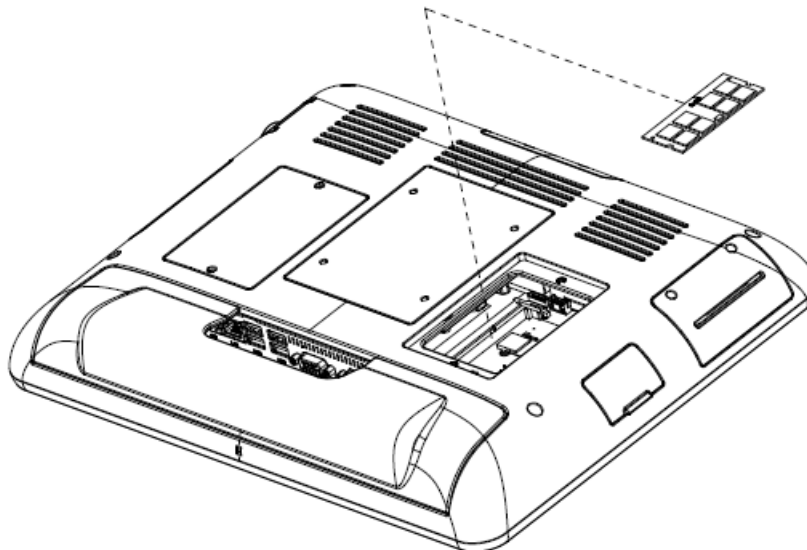
PIN	Signal	PIN	Signal	PIN	Signal
1	R	6	GND	11	+12V
2	G	7	GND	12	DATA
3	B	8	GND	13	HSYNC
4	+12V	9	+5V	14	VSYSNC
5	GND	10	GND	15	CLK

## 2.2 Installing Memory, Mini PCI-e device & Hard Disk

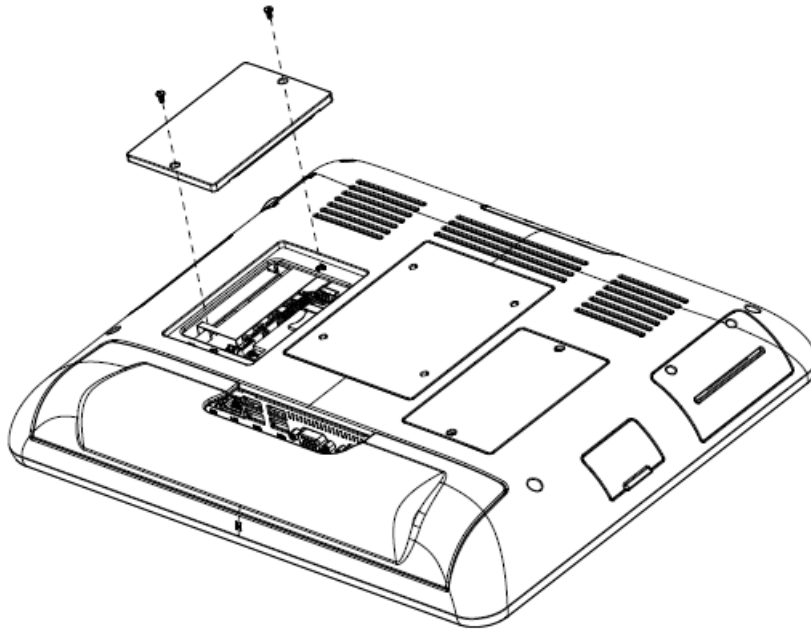
**Step 1. Memory Installation:** Unfasten 2 screws from the case. Then take off the top chassis.



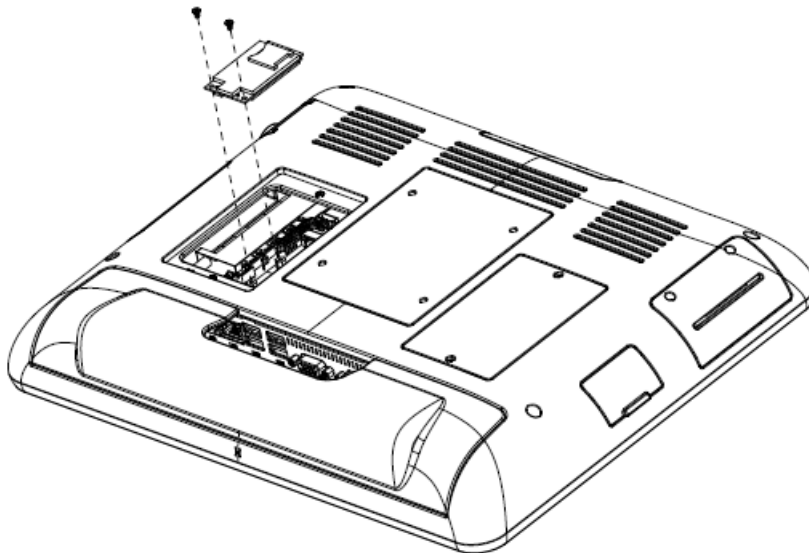
**Step 2.** Insert the SODIMM into the memory socket.



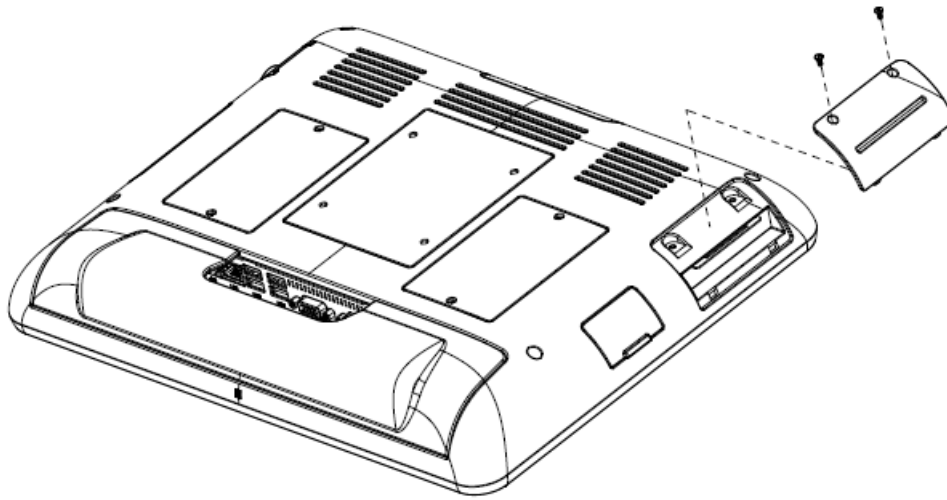
**Step 3. Mini PCI-e device Installation:** Unfasten 2 screws from the case. Then take off the top chassis.



**Step 4.** Insert the Mini PCI-e device into the socket and fasten 2 screws.



**Step 5. HDD Installation:** Unfasten 2 screws from the case. Then take off the top chassis.



**Step 6.** Insert the HDD into the bracket and fasten 4 screws.

**Step 7.** Re-assemble your system back through previous steps to complete the installation.

