Rity8R/10R/12R/15R Series

8"/ 10"/12"/ 15" Android POS

Quick Reference Guide

1st Ed – 02 March 2015

Part No. E2017R15RA0R

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 UNDESIRED 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.

Notice

This guide is designed for experienced users to setup the system within the shortest time. For detailed information, please always refer to the electronic user's manual.

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into body, or (b) support or sustain life and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

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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/

Content

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 Rity8R/10R/12R/15R Series
- 1 x 12V Adapter
- 1 x Power Cord
- 1 x VESA
- Optional MSR (10R/12R/15R)
- Optional VFD/ Stand (12R/15R)

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

1.3 System Specifications

System ⏷		
Model	**Rity8R**	**Rity10R**
Processor	Freescale i.MX 6 Dual Lite	
	Freescale i.MX 6 Quad Core	
System Memory	1GB DDR3 RAM (Dual Lite)	
	2GB DDR3L RAM (Quad)	
Expansion ⏷		
Expansion	1 x Mini PCI Express slot (Supported WIFI & 3.5G module)	
	1 x Micro SD slot	
	1 x SIM card holder onboard	
Storage ⏷		
Storage	4GB eMMC up to 8GB (expansible by Mini SD)	
I/O ⏷		
USB	2 x USB 2.0	
	1 x OTG	
COM Port	2 x RS232	
External I/O Connector	1 x USB Type A Double Deck	
	2 x RJ45 Connector with Indicate LED	
	1 x HDMI Connector (Vertical Type)	
	1 x Mini USB Connector	
	1 x RJ11 Connector for Cash Drawer	
	2 x DB9 Male Connector	
	1 x DC 12V Power Input by Power DC Jack	
Internal I/O Connector	1 x VGA (Quad core only)	
	3 x USB pin header	
	1 x 5-wire RES/PCT Touch Interface	
	1 x Dual Channel 24-bit LVDS	
	1 x Stereo Speaker-out (4ohm 0.5W x 2)	
	1 x Mini PCIe x 1 (with USB Signal Only)	
	1 x SIM Socket	
	1 x "Front Panel Connector with Power Button & Indicate LED for Power & LAN & WIFI"	
Display ⏷		

Resolution	Max. resolution 1024 x 600	Max. resolution 1366 x 768
Multiple Display	LVDS + VGA (Only i.MX6 Quad core can be achieved)	
	LVDS + HDMI	

Audio ⊙		
Chipset	Wolfson WM8962	
Audio Interface	2P Pin Header x 2 (Speaker-out R & L)	
	(Driver Per Channel Max 2W)	

Ethernet ⊙		
Chipset	LAN 1: From i.MX6 MAC, PHY is Micrel KSZ9031RNX	
	LAN 2: Intel 82574L by PCIe Interface (Optional)	
Ethernet Interface	RJ45 Connectors for G LAN	

Mechanical & Environmental ⊙		
Power Requirement	DC 12 ~ 24V Power Input	
Power Type	2.5mm DC Jack	
Operating Temp.	0°C ~ 40°C	
Storage Temp.	-10°C ~ 60°C	
Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing	
Dimension (W x D x H)	231.7mm x 149.5mm x 42mm	260mm x 178mm x 42mm
Weight	1.48 Kgs	1.8 Kgs

Certifications ⊙		
Certification Information	CE Class B	
	FCC Class B	
	VCCI Class B	

Software Support ⊙		
OS Information	Android 4.4.2	
	Ubuntu 12.04	
	Yocto 1.5.1	

Rity8R/10R/12R/15R Series

System ▼		
Model	**Rity12R**	**Rity15R**
Processor	Freescale i.MX 6 Dual Lite	
	Freescale i.MX 6 Quad Core	
System Memory	1GB DDR3 RAM (Dual Lite)	
	2GB DDR3L RAM (Quad)	
Expansion ▼		
Expansion	1 x Mini PCI Express slot (Supported WIFI & 3.5G module)	
	1 x Micro SD slot	
	1 x SIM card holder onboard	
Storage ▼		
Storage	4GB eMMC up to 8GB (expansible by Mini SD)	
I/O ▼		
USB	2 x USB 2.0	
	1 x OTG	
COM Port	2 x RS232	
External I/O Connector	1 x USB Type A Double Deck	
	2 x RJ45 Connector with Indicate LED	
	1 x HDMI Connector (Vertical Type)	
	1 x Mini USB Connector	
	1 x RJ11 Connector for Cash Drawer	
	2 x DB9 Male Connector	
	1 x DC 12V Power Input by Power DC Jack	
Internal I/O Connector	1 x VGA (Quad core only)	
	3 x USB pin header	
	1 x 5-wire RES/PCT Touch Interface	
	1 x Dual Channel 24-bit LVDS	
	1 x Stereo Speaker-out (4ohm 0.5W x 2)	
	1 x Mini PCIe x 1 (with USB Signal Only)	
	1 x SIM Socket	
	1 x "Front Panel Connector with Power Button & Indicate LED for Power & LAN & WIFI"	
Display ▼		
Resolution	Max. resolution 1024 x 768	
Multiple Display	LVDS + VGA (Only i.MX6 Quad core can be achieved)	
	LVDS + HDMI	

Audio ⊙	
Chipset	Wolfson WM8962
Audio Interface	2P Pin Header x 2 (Speaker-out R & L) (Driver Per Channel Max 2W)

Ethernet ⊙	
Chipset	LAN 1: From i.MX6 MAC, PHY is Micrel KSZ9031RNX
	LAN 2: Intel 82574L by PCIe Interface (Optional)
Ethernet Interface	RJ45 Connectors for G LAN

Mechanical & Environmental ⊙		
Power Requirement	DC 12 ~ 24V Power Input	
Power Type	2.5mm DC Jack	
Operating Temp.	0°C ~ 40°C	
Storage Temp.	-10°C ~ 60°C	
Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing	
Dimension (W x D x H)	322mm x 250mm x 47mm	362.1mm x 290.08mm x 51mm
Weight	2.35 Kgs	3.39 Kgs

Certifications ⊙	
Certification Information	CE Class B
	FCC Class B
	VCCI Class B

Software Support ⊙	
OS Information	Android 4.4.2
	Ubuntu 12.04
	Yocto 1.5.1

Note: Specifications are subject to change without notice.

1.4 System Overview

1.4.1   Front View

Power Button
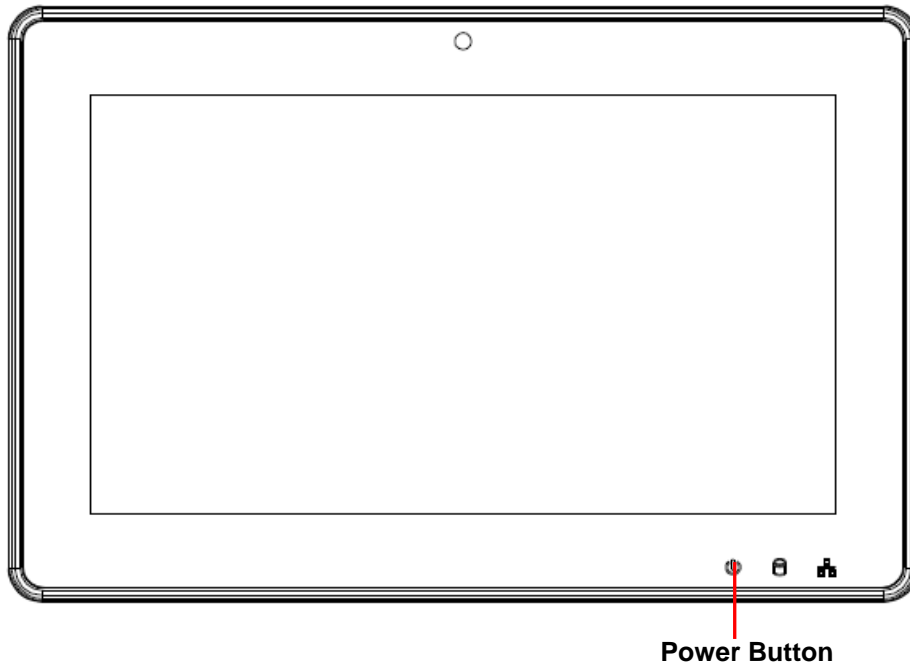
1.4.2   Bottom View

Rity8R
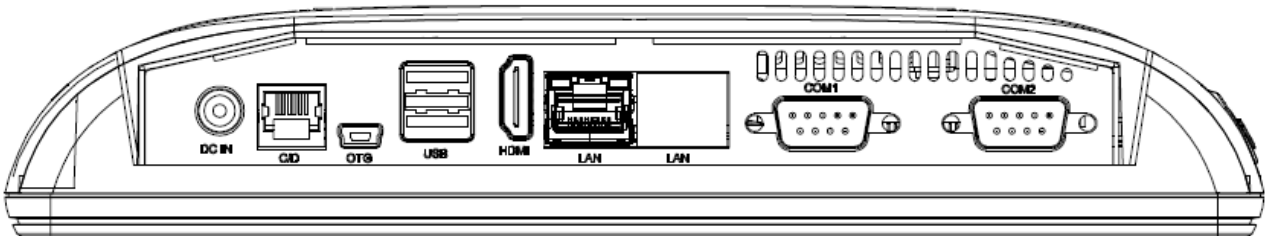
Rity10R
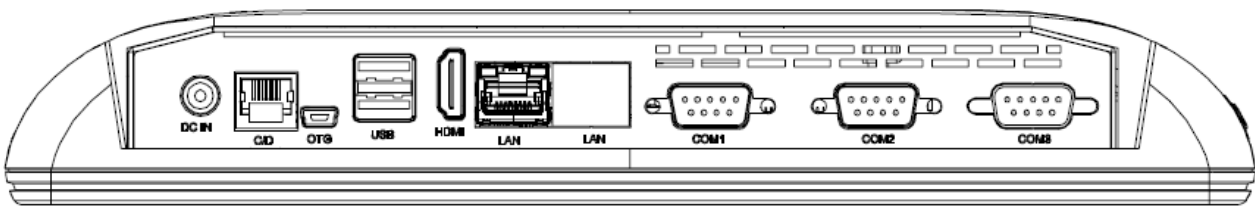
Rity12R
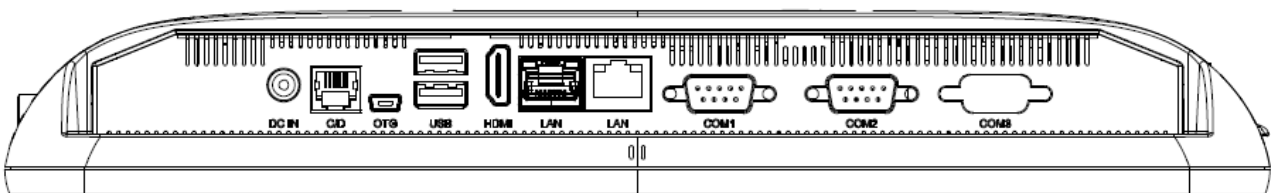
Rity15R
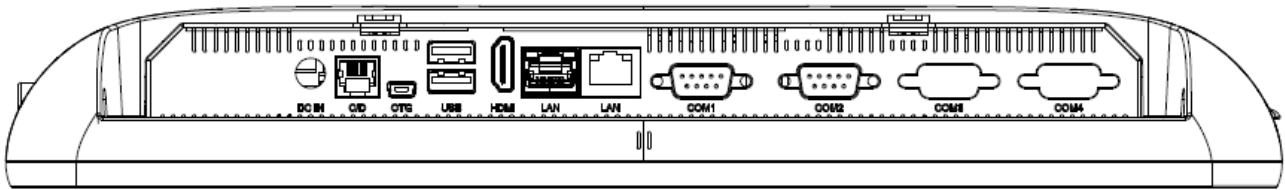
Connectors

Label	Function	Note
DC-IN	DC Power-in connector	
C/D	Cash Drawer connector	
USB	2 x USB2.0 connectors	
OTG	Mini USB connector	
HDMI	HDMI connector	
LAN	2 x RJ45 connectors	
COM1/2	Serial port 1/2 connector	DB-9 male connector

1.5 System Dimensions

1.5.1   Rity8R Front and Rear side
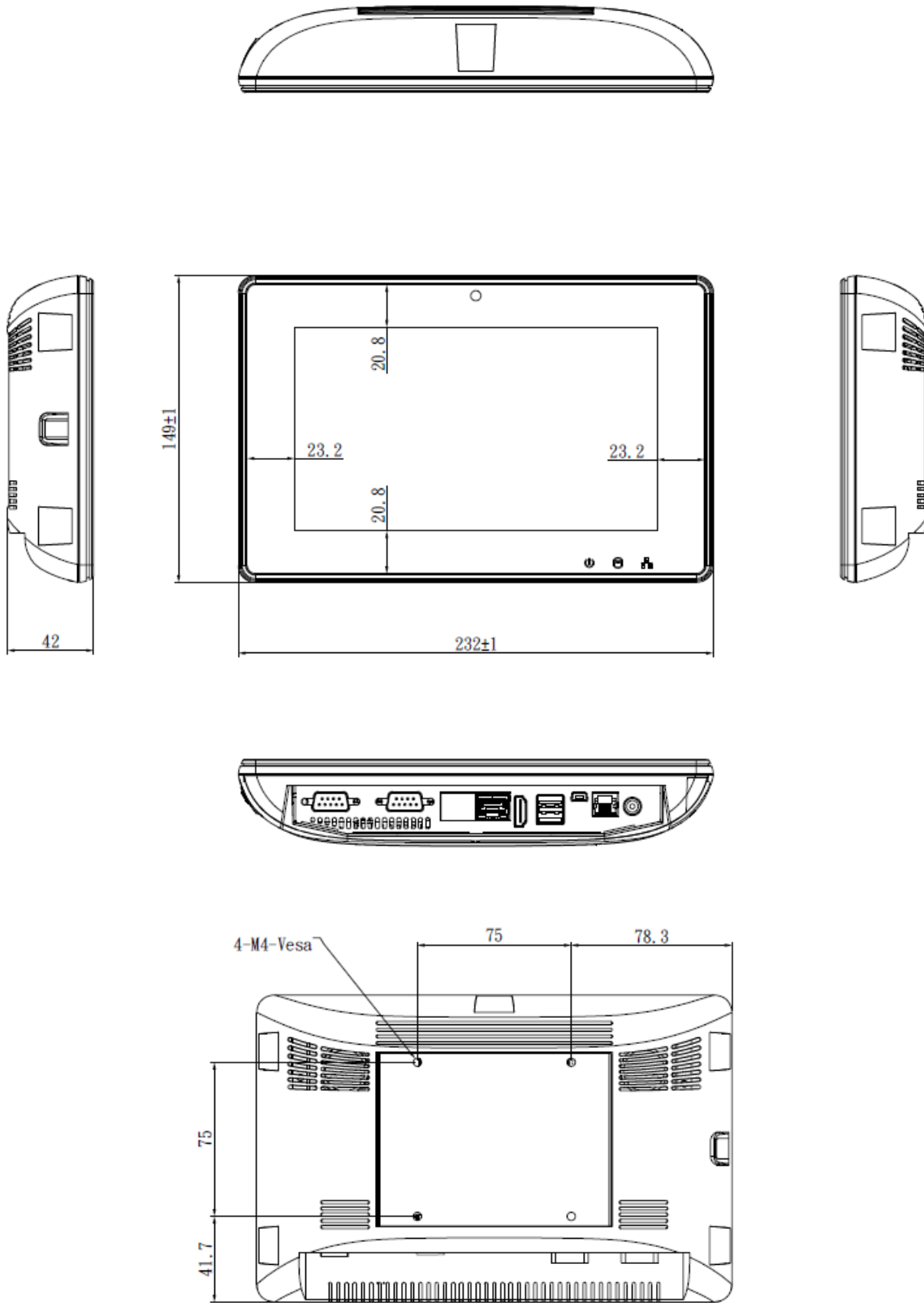
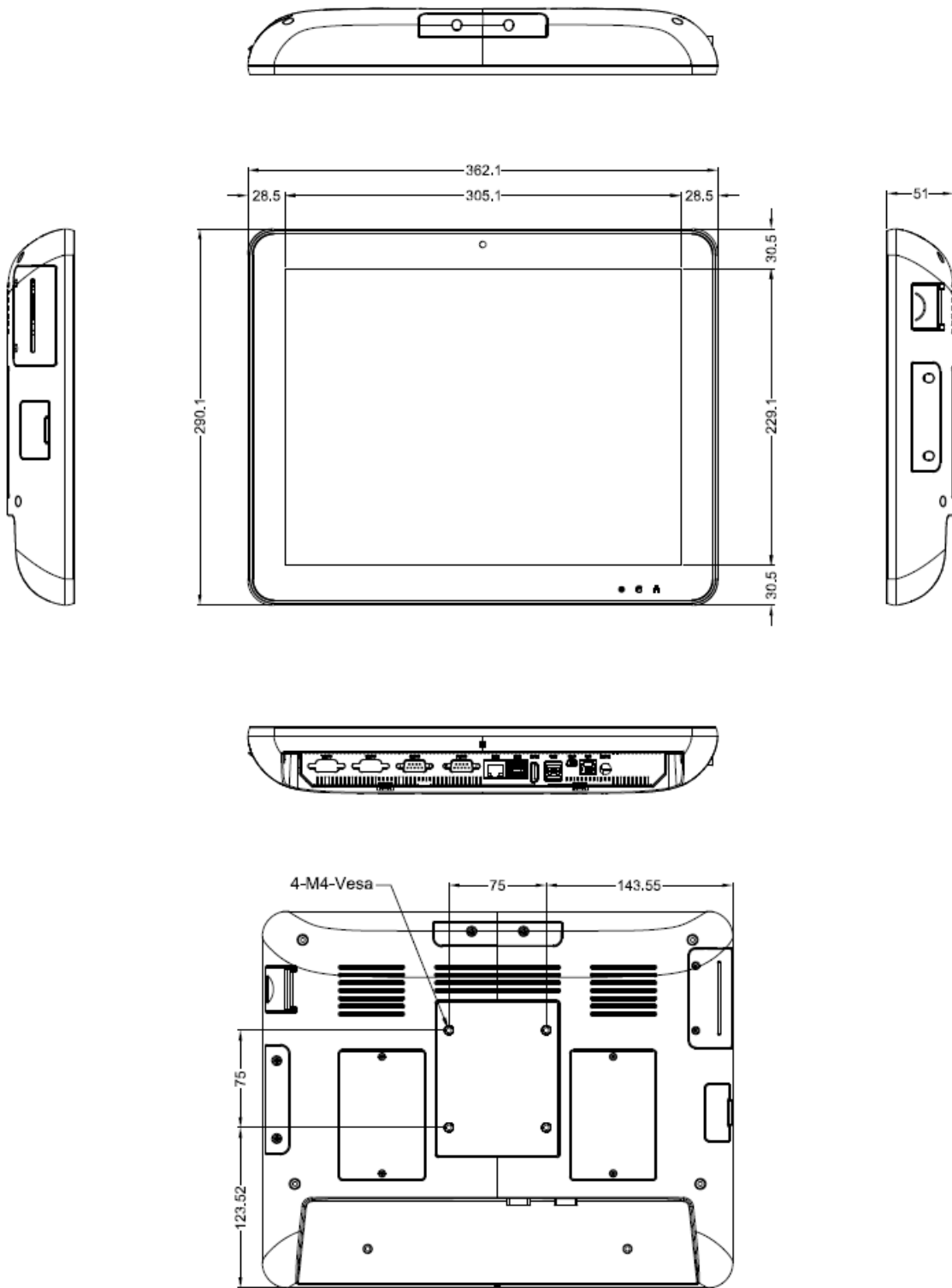**(Unit: mm)**

1.5.2   Rity10R Front and Rear side
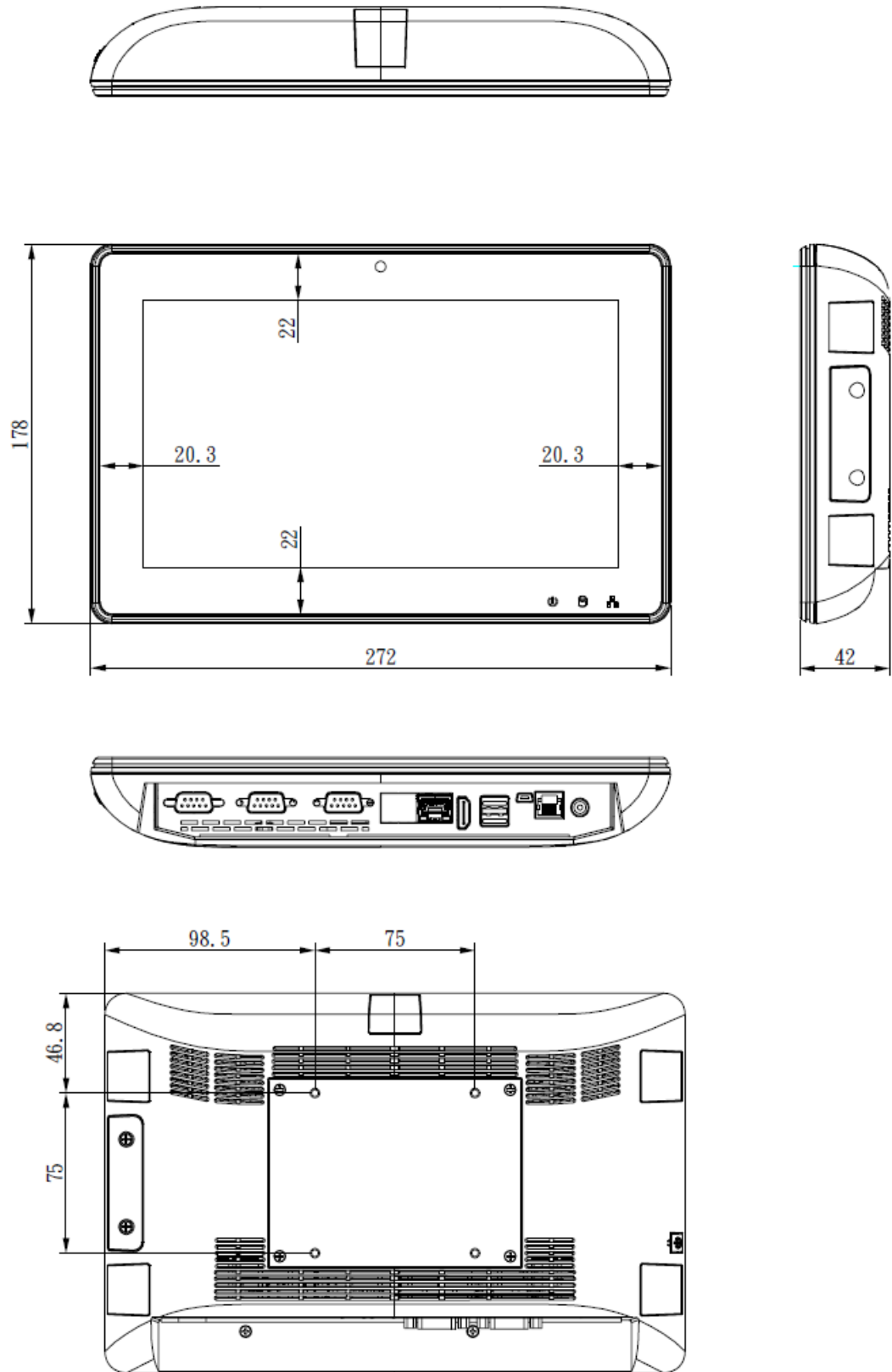
(Unit: mm)

1.5.3   Rity12R Front and Rear side
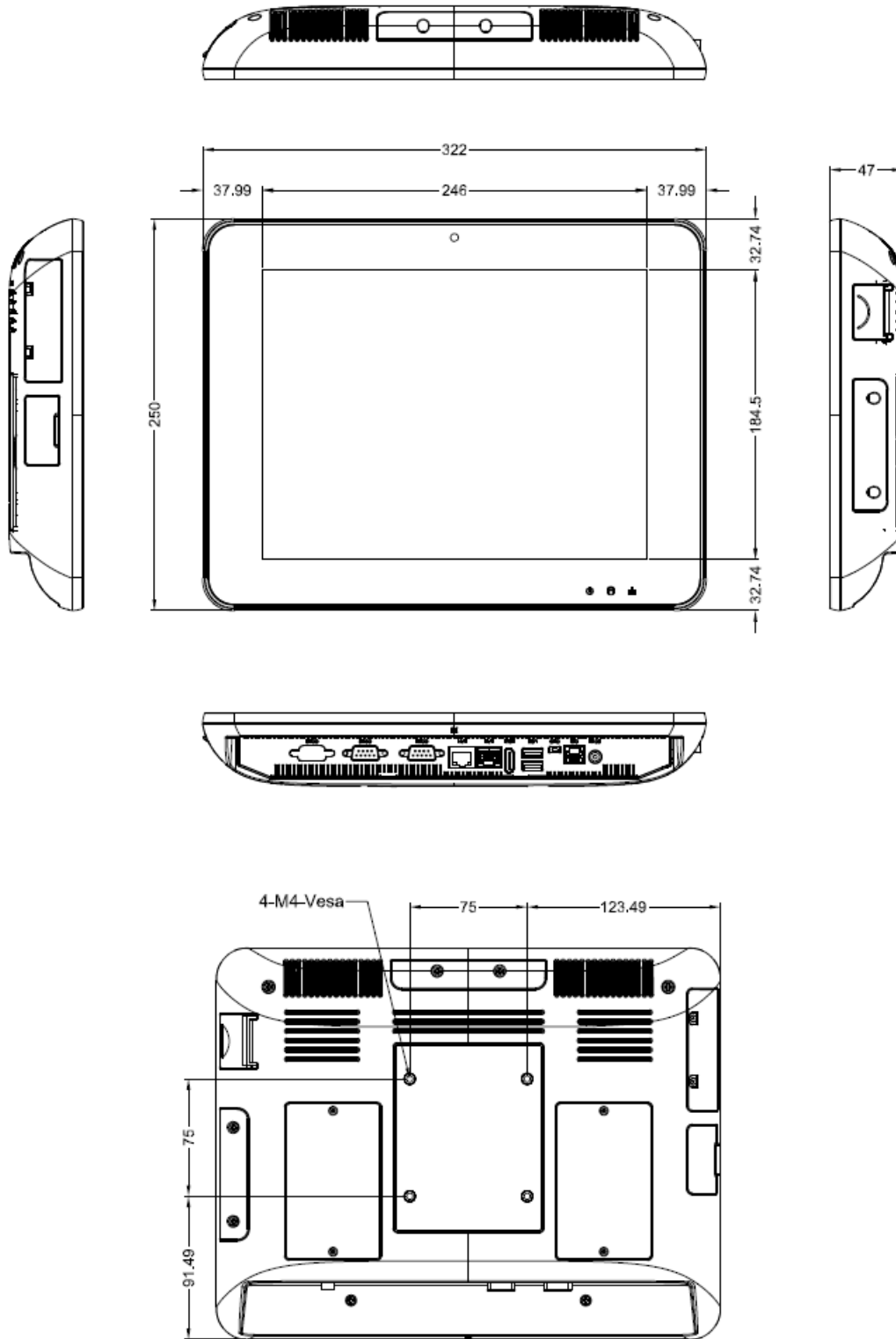
(Unit: mm)

1.5.4 Rity15R Front and Rear side

(Unit: mm)

2. Hardware Configuration
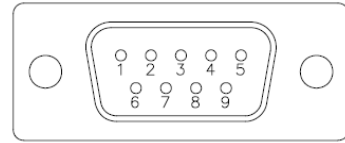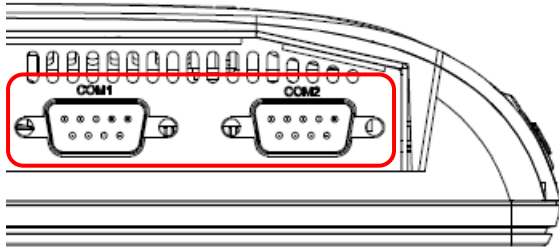
Note: If you need more information, please visit our website:

http://www.avalue.com.tw

2.1 Rity8R/10R/12R/15R Series connector mapping

2.1.1   Serial port 1/2 connector (COM1/2)

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

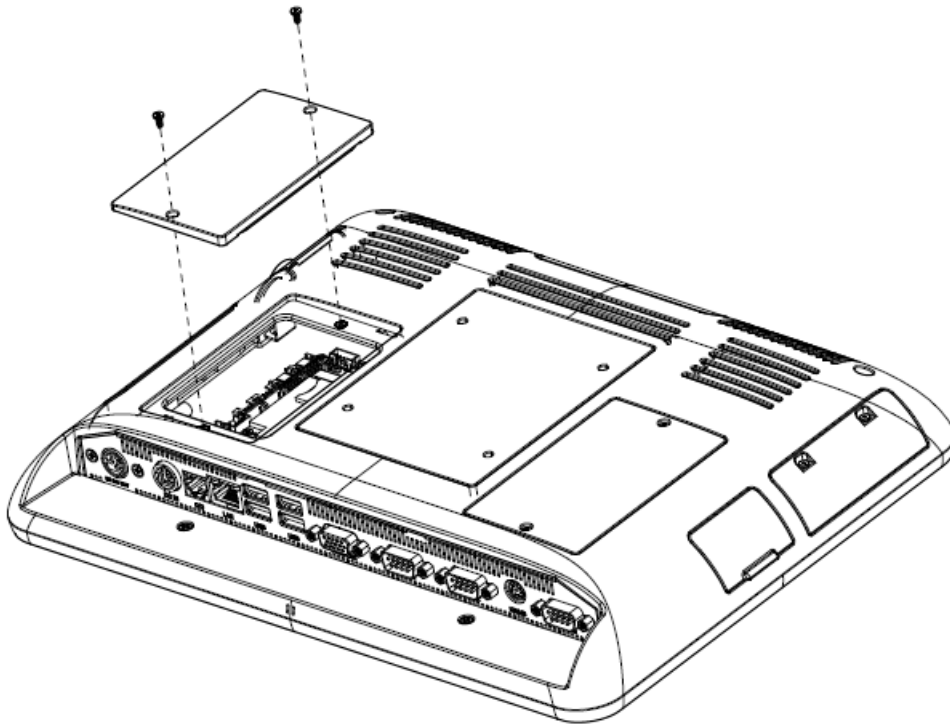## 2.2 Installing Memory & Mini PCI-e device

Step 1. Unfasten 2 screws from the case. Then take off the top chassis.
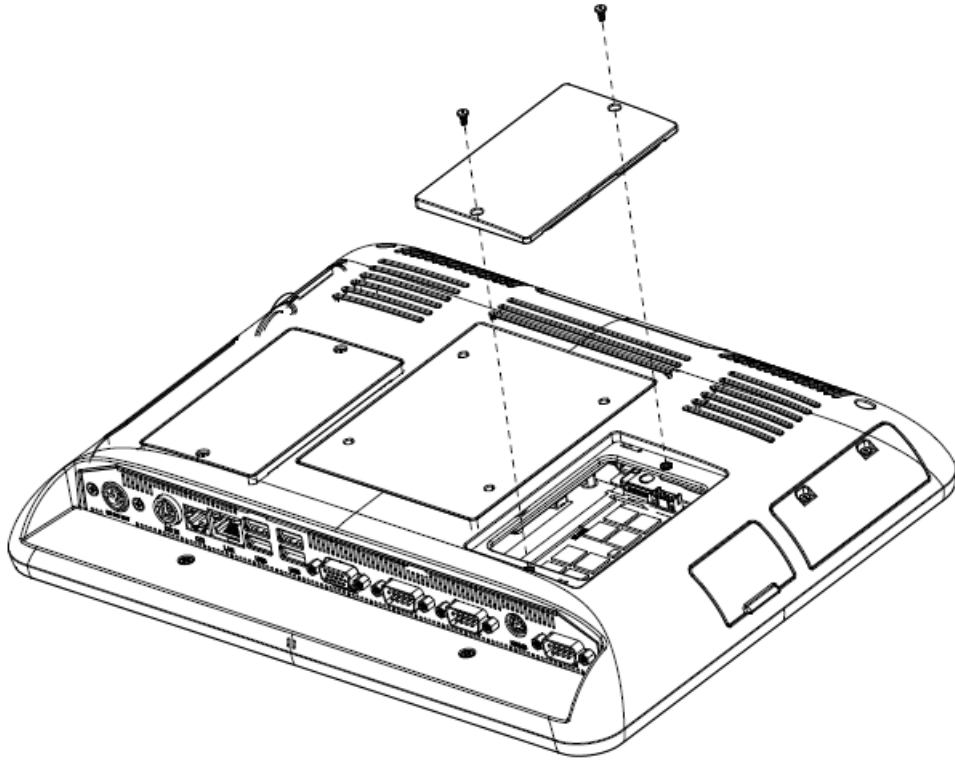
Step 2. Insert the SIM card into the socket.
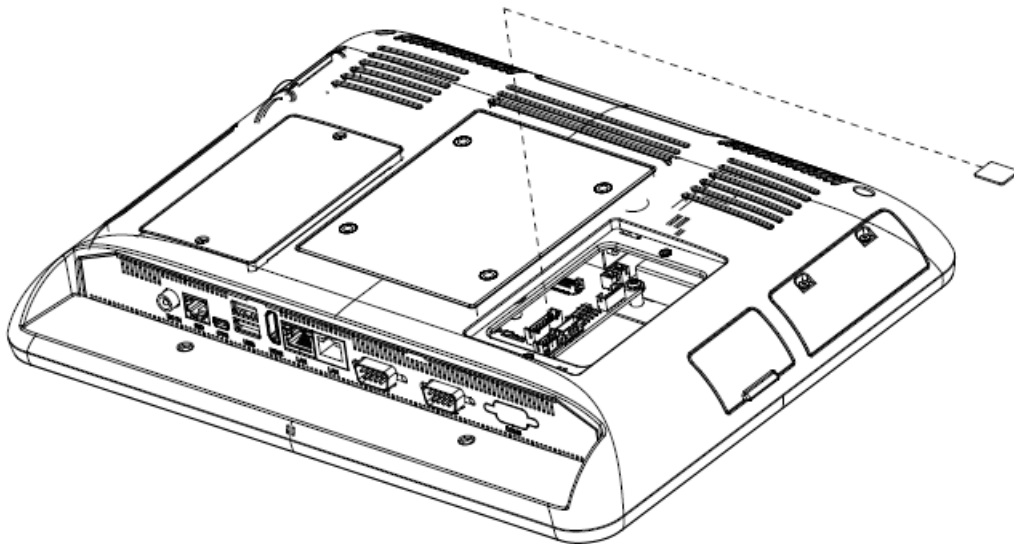
Step 3. Unfasten 2 screws from the case. Then take off the top chassis.

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

Step 5. Re-assemble your system back through previous steps to complete the installation.