RiPac-10P1

10” Mini POS

Quick Reference Guide

1st – 24 March 2022

Part No. E2017R102A0R

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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Avalue Technology's PRODUCTS ARE NOT FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE PRIOR WRITTEN APPROVAL OF Avalue Technology Inc.

As used herein:

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.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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/

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 RiPac-10P1
- 1 x 19.5V Adapter
- 1 x Power Cord
- 2 x Thermal Printer Paper Holder

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

1.3 System Specifications

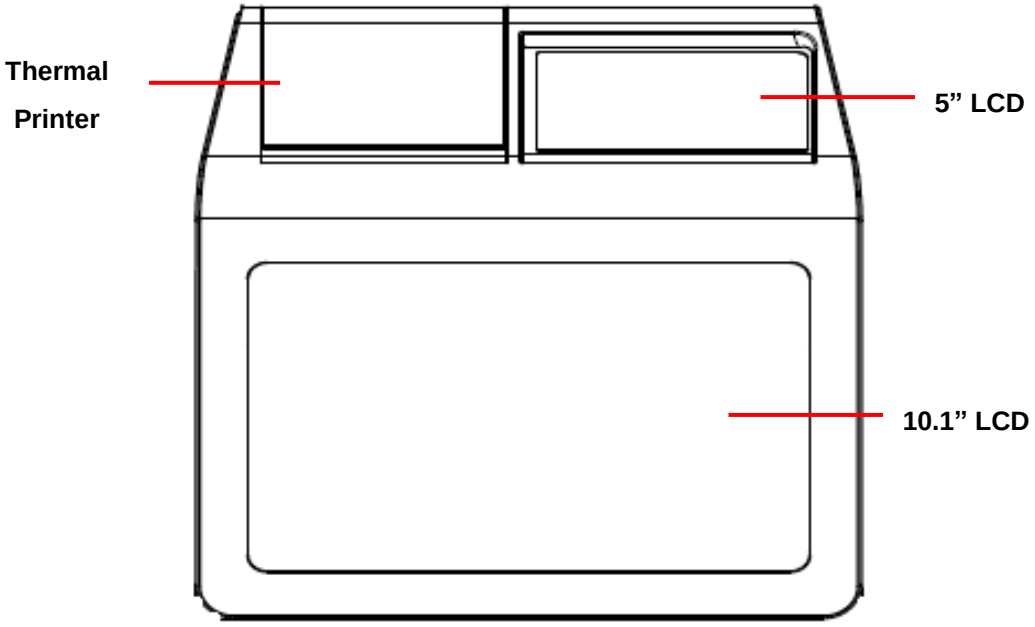
System	
Processor	Intel Atom Z3735F 1.33GHz Processor
Memory	2GB DDR3L SDRAM
Wireless LAN	Built-In IEEE 802.11 b/g/n
Bluetooth	Built-In Bluetooth 4.0 + Class 1
Operating System	Windows 10 (32 bit) / Android 4.4.4 (64 bit)
Panel	
LCD Panel	10.1" LCD, 5" LCD (customer side) (Optional)
Resolution	1280 x 800 (10.1"), 1280 x 800 (5")
Touch Screen	Projected Capacitive Touch
Storage	
Solid State Drive	32GB (Default)/ 64GB (Optional) eMMC
External I/O	
Serial Port	2 x RS232 in DB9, Powered with 5/12V
USB Port	4 x USB 2.0
LAN Port	1 x RJ45
Cash Drawer	1 x RJ11
NFC	ISO/IEC 14443 A/B, 15693/18092
Thermal Printer	
Printing Method	Thermal Dot Line Printing
Total Dots Per Line	576 Dots
Resolution	(W)8 Dots/mm, (H)8 Dots/mm
Max. Print Speed	200mm/s
Max. Print Width	72mm
Max. Paper Width	80mm
Paper Cutting	Full Cut & Partial Cut
Media Dimensions:	80mm: 79.5 ± 0.5 (W) x 80mm diameter (3.13" ± 0.02” x 3.15") 58mm: 57.5 ± 0.5 (W) x 80mm diameter (2.26" ± 0.02” x 3.15")
Mechanical	
Power Type	19.5V/6.15A 120W Adapter
Power Connection Type	DC Jack
Dimension	(L)299 x (W)316.2 x (H)148.9
Weight	3KG±10%
Color	Black & Gray
Fanless	Yes
Reliability	
Certifications	CE/FCC

Operating Temperature	5°C ~ 40°C
Operating Humidity	0~95% Non-Condensing
Storage Temperature	-10°C~60°C

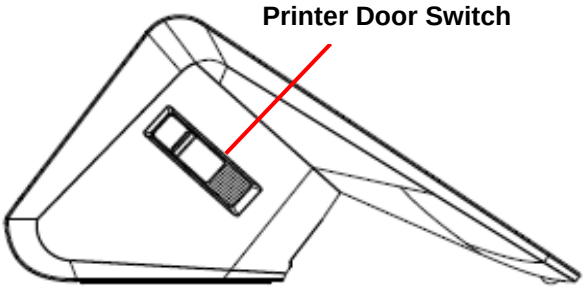
Note: Specifications are subject to change without notice.

1.4 System Overview

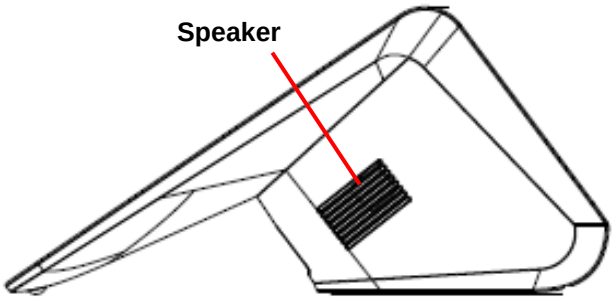
1.4.1 Top View



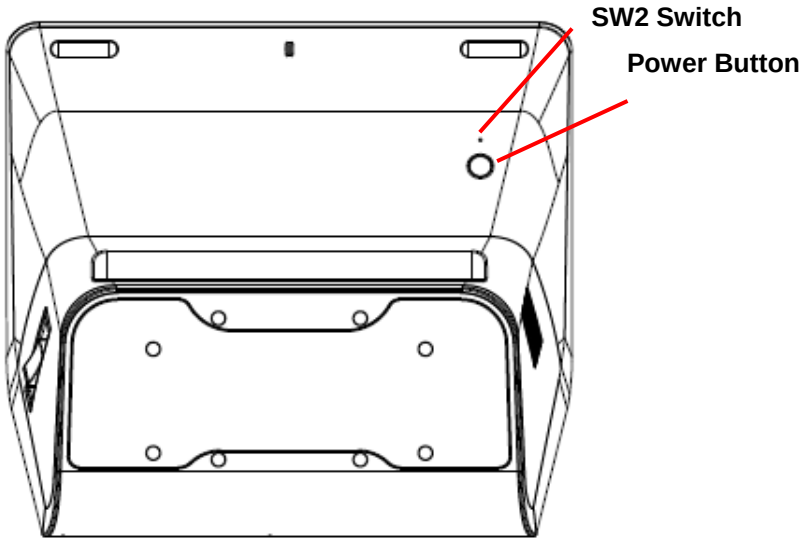
1.4.2 Left Side



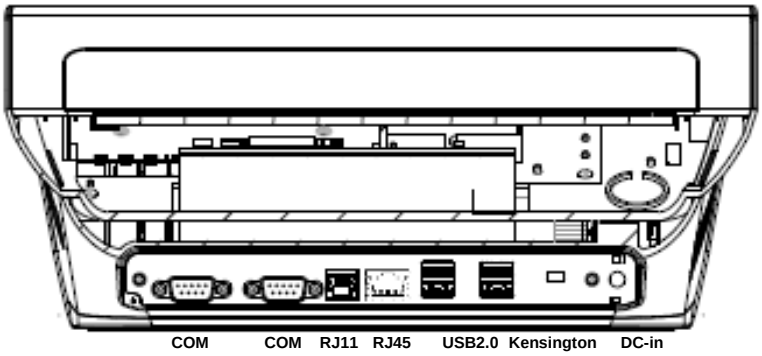
1.4.3 Right Side



1.4.4 Bottom



1.4.5 I/O Interface

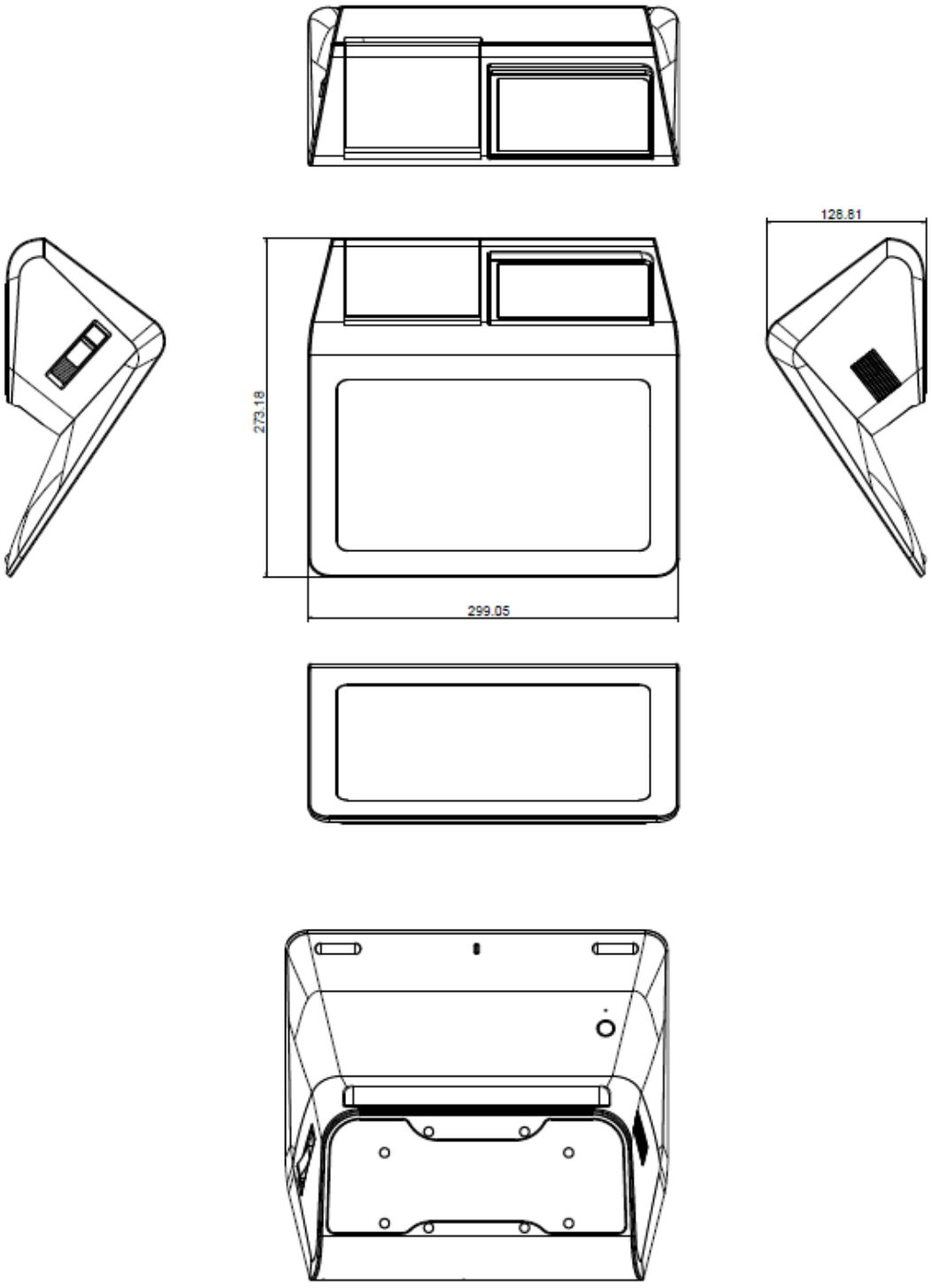


Connectors

I/O	Function	Note
COM	Serial port connector (RS232)	DB-9 male connector
RJ11	Cash drawer connector	
LAN	1x RJ45 connectors	
USB	4 x USB2.0 connectors	
Kensington Lock	Kensington Security Slot	
DC-in	DC Power-In connector	

1.5 System Dimensions

1.5.1 RiPac-10P1



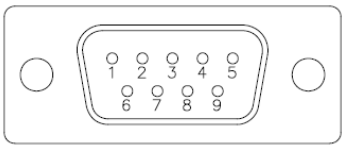
2. Hardware Configuration

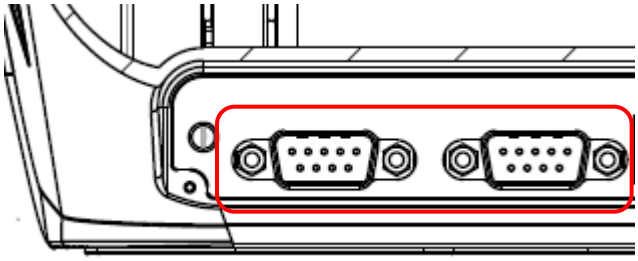
Note: If you need more information, please visit our website:

http://www.avalue.com.tw

2.1 RiPac-10P1 Connector Mapping

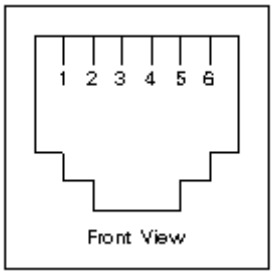
2.1.1 Serial Port Connector (COM)

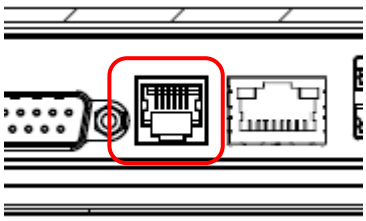




Signal	PIN	PIN	Signal
DCD#_1	1	6	DSR#_1
RXD_1	2	7	RTS#_1
TXD_1	3	8	CTS#_1
DTR#_1	4	9	RING/5V/12V
GND	5		

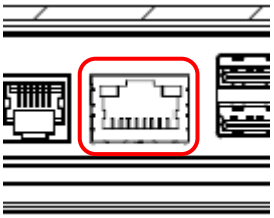
2.1.2 RJ11 Connector

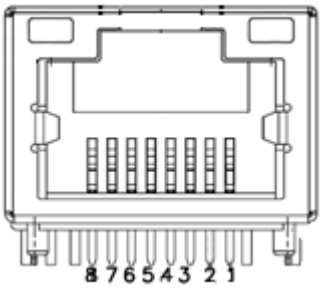




Signal	PIN
GND	1
KICKOUT1	2
CASH_SENSE	3
+12VA_+24VA_CASH	4
KICKOUT2	5
GND	6

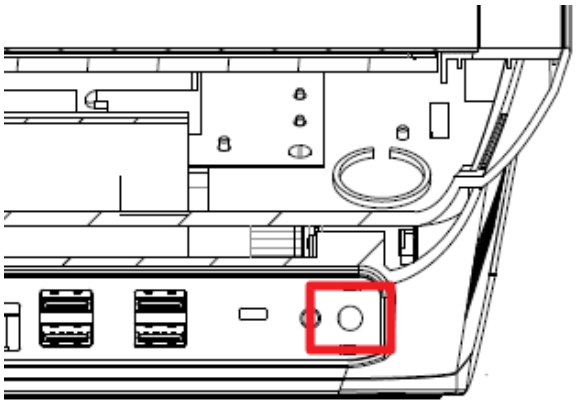
2.1.3 RJ45

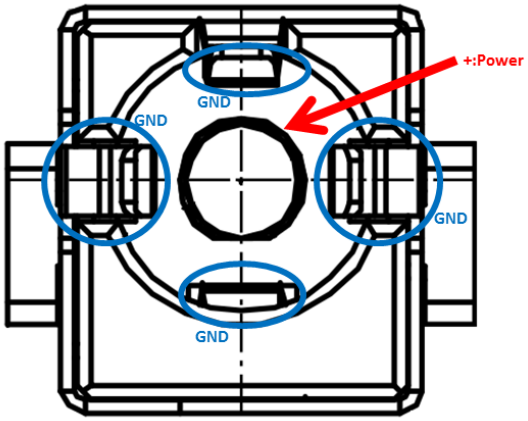




Signal	PIN	PIN	Signal
LAN0_MDIP0	1	8	N.C.
LAN0_MDIN0	2	9	Yellow_LED0-
LAN0_MDIP1	3	10	Yellow_LED0+
N.C.	4	11	Green_LED0-
N.C.	5	12	Green_LED0+
LAN0_MDIN1	6	13	N.C.
N.C.	7	14	

2.1.4 DC Jack





3. Peripherals

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

http://www.avalue.com.tw

3.1 Wi-Fi, Bluetooth

3.1.1 WLAN Key Features

- IEEE 802.11b/g/n radio – virtual simultaneous operation
- Also supports 20 and 40 MHz channel allowing for PHY Layer throughput up to 150 Mbps
- Security – WEP, WPA/WPA2
- 802.11e QoS Enhancement (WMM)

3.1.2 Bluetooth Key Features

- Supports extended Synchronous Connections (eSCO)
- Adaptive Frequency Hopping (AFH)
- Supports 4 piconets in a scatternet
- Bluetooth Class 1 or Class 2 transmitter operation
- Supports all Bluetooth 4.0 packet types

3.1.3 Specifications

Product Description	
WLAN Standard	IEEE 802.11b/g/n, Wi-Fi compliant
Bluetooth Standard	**Bluetooth 2.1+Enhanced Data Rate (EDR) / BT4.0**
Audio Interface	Digital PCM for Bluetooth
Major Chipset	Realtek RTL8723BS
Wifi PID/VID	B723/024C
Electrical Specifications	
Frequency Range	WLAN: 2.4 GHz Band 2.412-2.472 GHz Bluetooth: 2400~2483.5MHz
Number of Channels	802.11b : USA, Canada and Taiwan : 1~11 Most European Countries : 1~13 Japan : 1~13 802.11g : USA and Canada : 1~11 Most European Countries : 1~13 802.11n : USA and Canada : 1~11 Most European Countries : 1~13
Modulation	WLAN: DSSS, OFDM, BPSK(9/6Mbps), QPSK(18/12Mbps), DBPSK(1Mbps), DQPSK(2Mbps), CCK(11/5.5Mbps), 16-QAM(36/24Mbps), 64-QAM (72.2/54/48Mbps)

	Bluetooth: GFSK (1Mbps), Π/4DQPSK (2Mbps) and 8DPSK (3Mbps)
Output Power	WLAN 2.4G band: 11b: 16 dBm (± 2dBm) 11g: 14 dBm (± 2dBm) 11n HT20: 13 dBm(± 2dBm) 11n HT40: 13 dBm(± 2dBm) Bluetooth: 0 dBm ≤ Output Power ≤ 10 dBm (Conductive) *Specifications are subject to change without notice
Receive Sensitivity	WLAN 2.4G band(Min.): 11b (11Mbps): -76 dBm 11g (54Mbps): -65 dBm 11n (HT20 MCS7): -64 dBm 11n (HT40 MCS7): -61 dBm Bluetooth: GFSK: -70 dBm π/4-DQPSK: -70 dBm 8-DPSK: -70 dBm *Specifications are subject to change without notice
Data Rates	WLAN: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n:MCS 0~7 HT20/40 Bluetooth: Bluetooth 2.1+EDR data rates of 1, 2, and 3Mbps
Operating Range	Open Space: ~300m ; Indoor: ~100m for WLAN Minimum 10 m indoor for Bluetooth (The transmission speed may vary according to the environment)
Security	WPA™- and WPA2™- (Personal) support for powerful encryption and authentication AES and TKIP acceleration hardware for faster data encryption and 802.11i compatibility Secure Easy Setup™ for simple Wi-Fi® setup and WPA2/WPA security configuration Wi-Fi Protected Setup (WPS) WEP WMM

3.2 NFC

3.2.1 Features

- NXP NPC100 NFC Controller
- Full featured NFC controller industry's low power consumption
- Compliant with ISO/IEC 14443 A/B
- Compliant with 15693/18092
- Antenna pairing could be customized
- I2C interface
- The maximum of thickness is 1.5 mm.

3.2.2 Application

- NFC writer
- NFC reader
- NFC peer to peer controller
- NFC identification

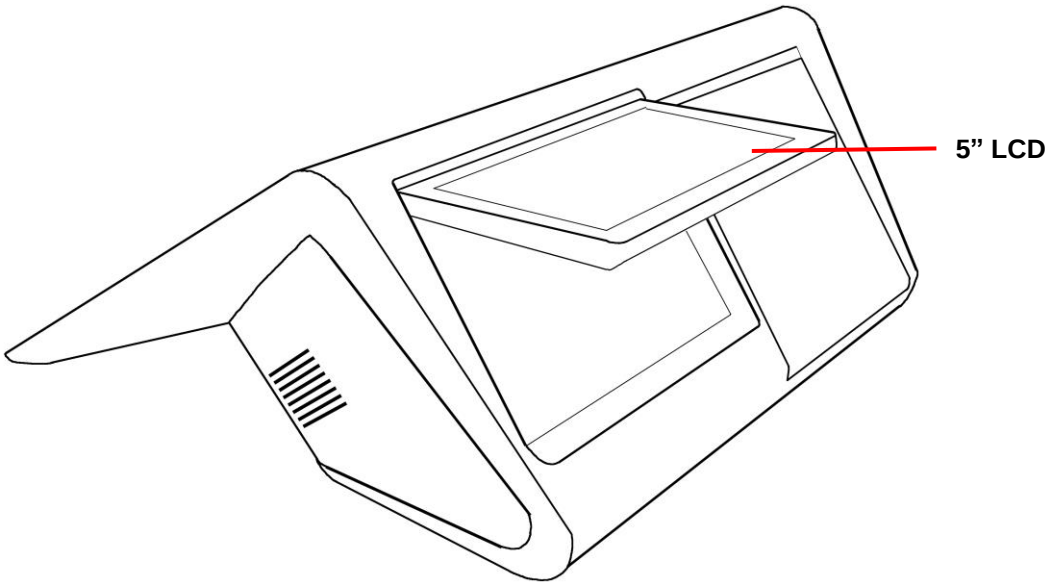
3.3 Thermal Printer

3.3.1 Thermal Printer Specifications

Thermal Printer	
Printing Method	Thermal Dot Line Printing
Total Dots Per Line	576 Dots
Resolution	(W)8 Dots/mm, (H)8 Dots/mm
Max. Print Speed	200mm/s
Max. Print Width	72mm
Max. Paper Width	80mm
Type of Paper Cutting	Full Cut & Partial Cut
Media Dimensions:	80mm: 79.5 ± 0.5 (W) x 80mm diameter (3.13" ± 0.02" x 3.15") 58mm: 57.5 ± 0.5 (W) x 80mm diameter (2.26" ± 0.02" x 3.15")

3.4 Second Display

3.4.1 Second Display



3.4.2 Second Display Specifications

5” Second Display	
LCD Type	TFT/Transmissive
Viewing Angle	Full Viewing Angle
Pixel Pitch (W x H)	0.08625x0.08625 mm²
Resolution	800 x 1280
Backlight Type	LED

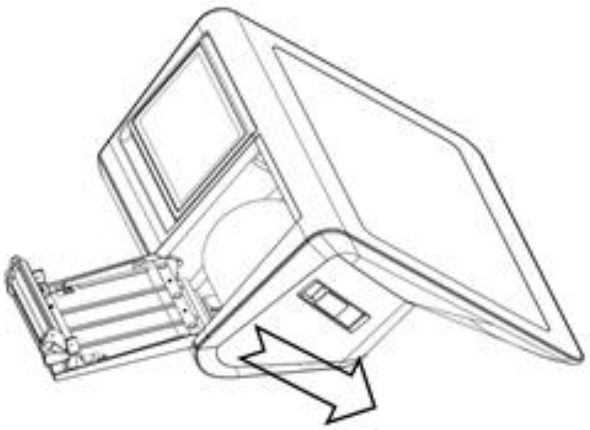
4. Hardware Maintenance

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

http://www.avalue.com.tw

4.1 Paper Roll Loading

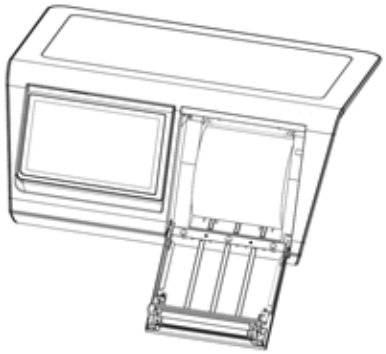
Step 1 Push down the switch to open the paper roll door.



Step 2

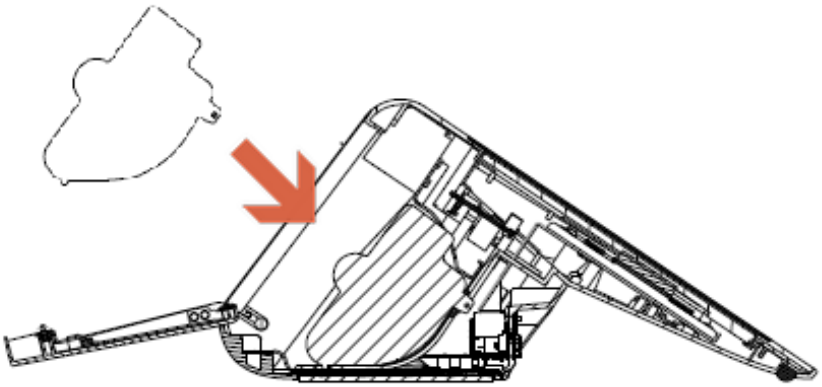
80mm Paper Roll

If you are using an 80mm paper roll, load the paper roll into the printer, in the direction indicated in below picture and close up the printer door after loading.



58mm Paper Roll

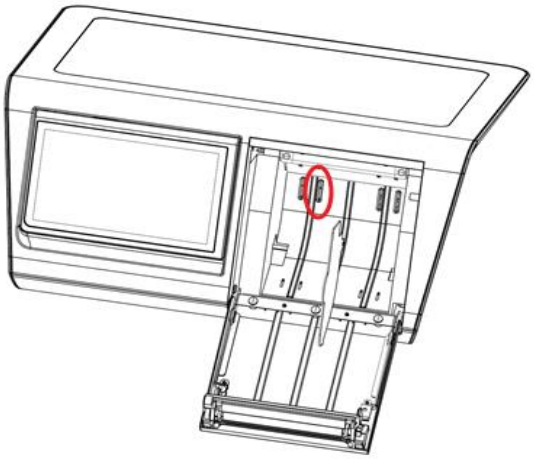
If you are using a 58mm paper roll, you can choose to load the paper roll either to the left, right or keep in the middle according to your printing settings and paper holders are provided to help keep the paper roll in place. Note that there are four holes in the printer for you to insert the paper holders.



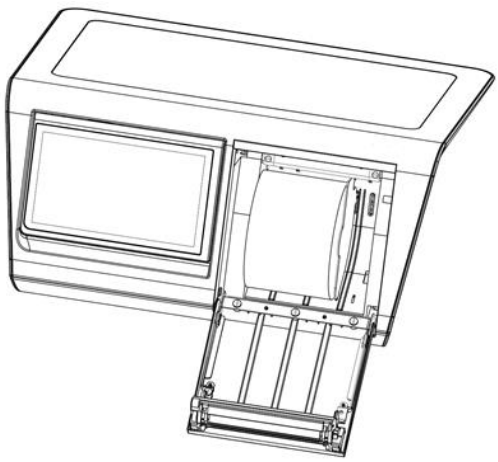
The methods for loading the paper roll are as below.

1. 58mm Paper Roll on the Right Side.

   Insert the paper holder into the second hole from the left.

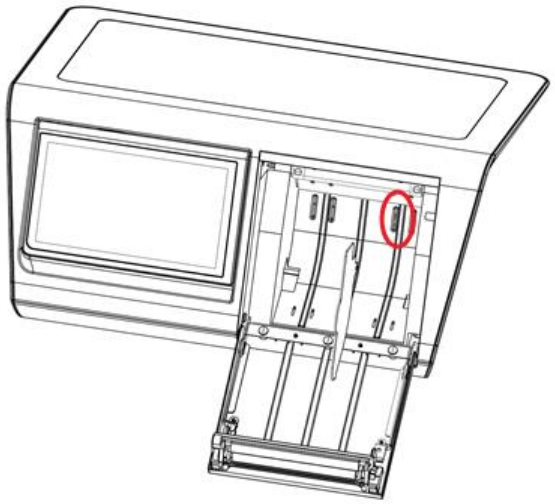


   Load the paper roll to the right side and close the printer door.

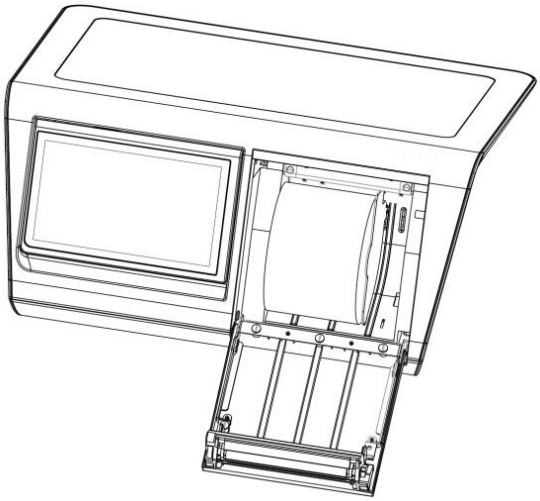


2. 58mm Paper Roll on the Left Side

Insert the paper holder into the second hole from the right.

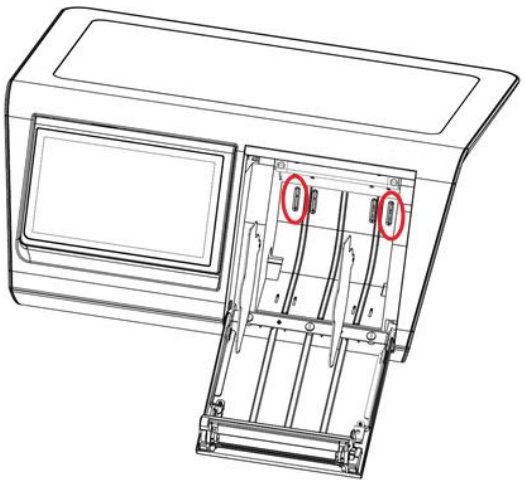


Load the paper roll to the left and close the printer door.

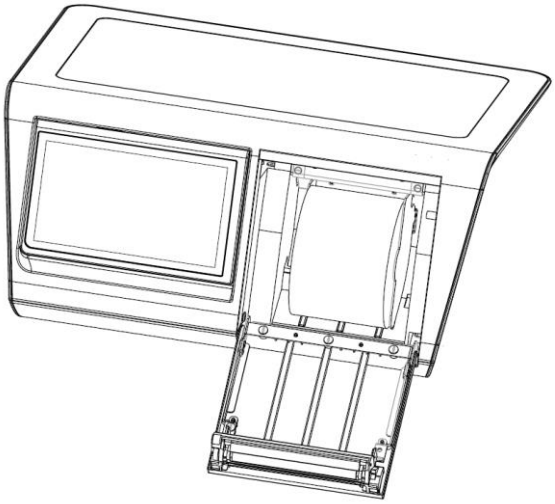


3. 58mm Paper Roll at the Middle.

Insert holders into the holes at the far left and the far right.

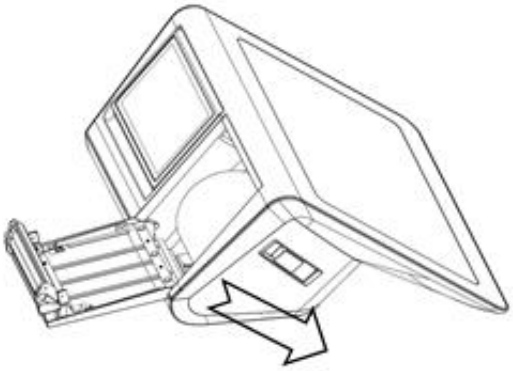


Load the paper roll in between the two holders then close the printer door.

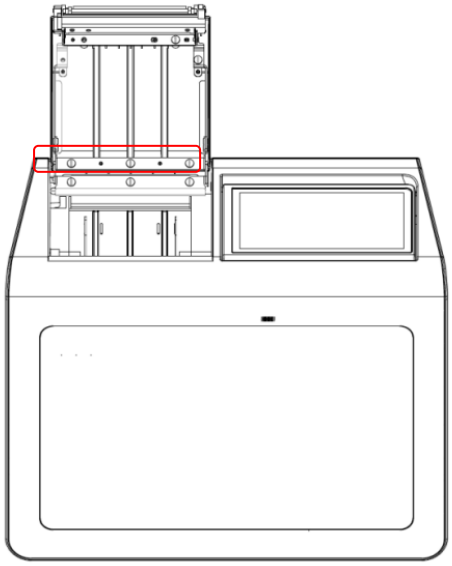


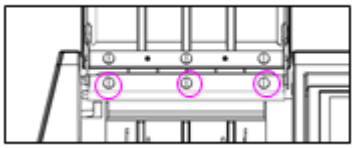
4.2 Replacement of Thermal Printer Module

Step 1 Push down the switch to open the paper roll door.

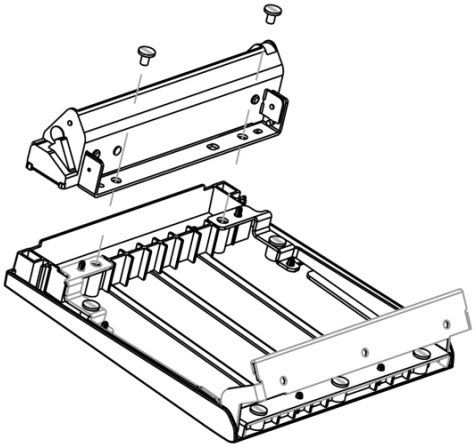


Step 2 Unscrew the three screws that connects the printer doo to the device in order to take down the printer door.

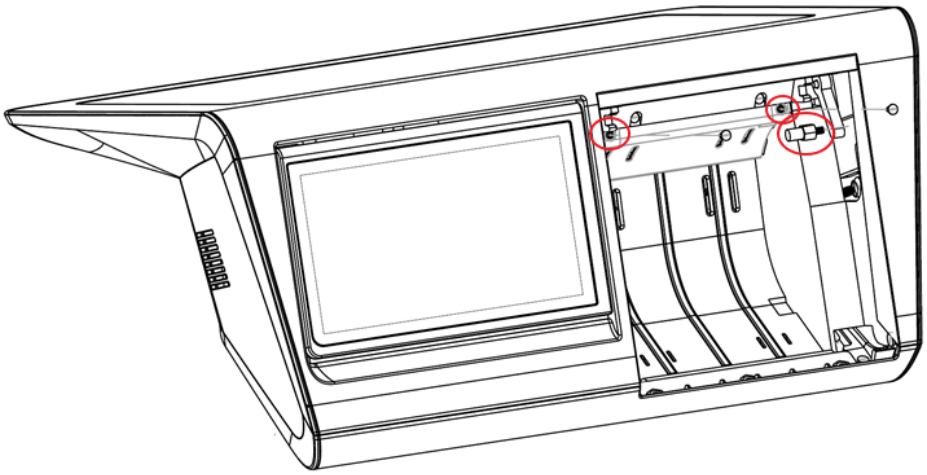




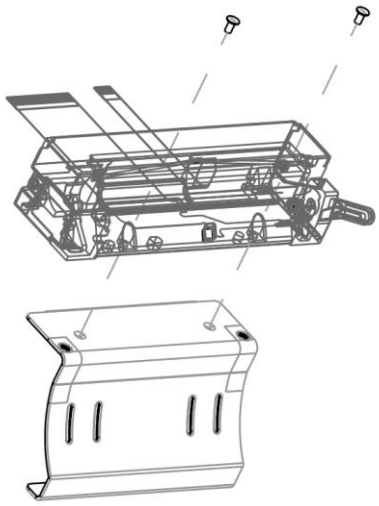
Step 3 Unscrew the two screws on the printer door to remove printer wheel.



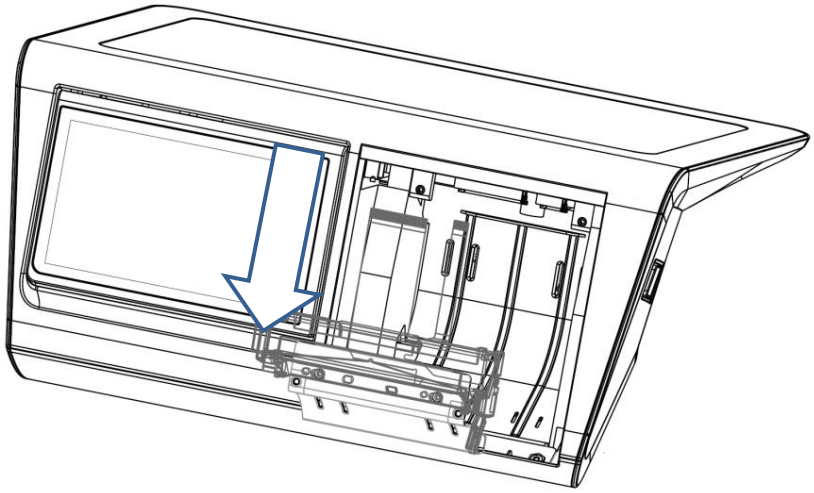
Step 4 Unscrew the two screws and the hex bolt to remove the printer assembly.



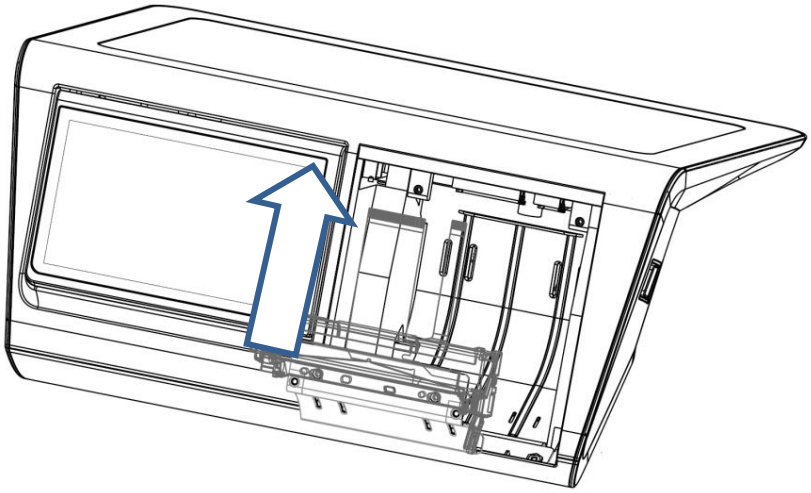
Step 5 Unscrew two screws on the printer assembly to take down the printer module.



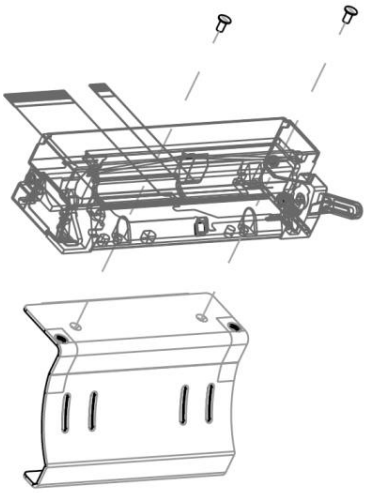
Step 6 Disconnect the two FPCs from the PCB.



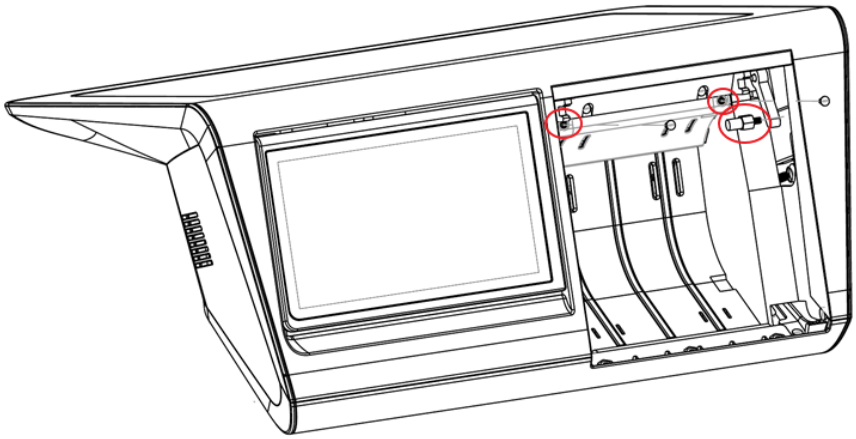
Step 7 Connect the FPCs of the new printer module onto the PCB.



Step 8 Use the screws to tie the printer module.

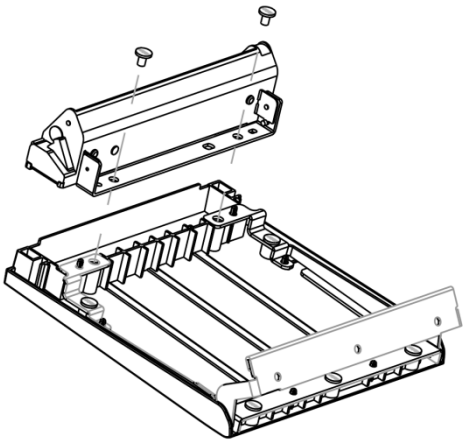


Step 9 Install the printer assembly back into the device with the screws and insert the hex bolt back into place.



NOTE: Always install the hex bolt back before closing up the printer door.

Step 10 Install the new printer wheel back onto the printer door.



Step 11 Fix the printer door back onto RiPac-10P1 and close up the door.