

LIVA X3A

Unlock Your Potential With Our Solutions

Unlock Your Potential With **Our Solutions**



USER GUIDE

Version: 1.0

ISO-9001 ISO-14001  



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Preface

Copyright

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Version 1.0

Disclaimer

The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. The manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

Trademark Recognition

Rockchip is a registered trademark of Rockchip Electronics Co.,Ltd. Other product names used in this manual are the properties of their respective owners and are acknowledged.

Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency 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 harmful interference to radio or television 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 the receiver
- Connect the equipment onto 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

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

We hereby certify that the above product has been tested by us with the listed standards and found in compliance with the council EMC directive 2014/30/EU.

- | | |
|--|---|
| <input type="checkbox"/> EN 55032 | Electromagnetic compatibility of multimedia equipment - Emission requirements |
| <input type="checkbox"/> EN 55035 | Electromagnetic compatibility of multimedia equipment - Immunity requirements |
| <input type="checkbox"/> EN 61000-3-2 | Electromagnetic Compatibility (EMC)
Part 3-2: Limits-Limits for harmonic current emissions (equipment input current 16A per phase) |

- ☐ **EN 61000-3-3** Electromagnetic Compatibility (EMC)
Part 3-3: Limits-Limitation of voltage changes, voltage fluctuations and flicker in public low voltage supply systems, for equipment with rated current 16A per phase and not subject to conditional connection

X3A Complies below directives:

RED (Radio Equipment Directive)
(2014/53/EU)

- ☐ **EN 301-489-1** V2.2.3: 2019-11
- ☐ **EN 301 489-17** V3.2.4: 2020-09
- ☐ **ETSI EN 300 328** V2.2.2
- ☐ **ETSI EN 301 893** V2.1.1
- ☐ **ETSI EN 300 440** V2.2.1
- ☐ **EN 50663:** 2017
- ☐ **EN 62368** Safety for information technology equipment including electrical business equipment

- ☐ **CE marking**



- ☐ **EU No. 617/2013**

	AT	BE	BG	CZ	DK	EE	DE
	CY	IE	IT	EL	ES	FR	LV
	LT	LU	HU	MT	NL	PL	PT
	RO	SI	SK	FI	SE	HR	UK(NI)

Japan

W52/W53 For Indoor Use Only

Safety Instructions

Your system is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions.

Setting up your system

- Read and follow all instructions in the documentation before you operate your system.
- Do not use this product near water or a heated source such as a radiator.
- Set up the system on a stable surface.
- Openings on the chassis are for ventilation. Do not block or cover these openings. Make sure you leave plenty of space around the system for ventilation. Never insert objects of any kind into the ventilation openings.
- Use this product in environments with ambient temperatures between 0°C and 40°C.
- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.

Attention during use

The power cord shall be connected to socket-outlet with an earthing connection.

- Do not step on the power cord or let anything rest on top of it.
- Do not spill water or any other liquid on your system.
- When the system is turned OFF, a small amount of electrical current still flows. Always unplug all power, modem, and network cables from the power outlets before cleaning the system.
- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.
 - The power cord or plug is damaged.
 - Liquid has been spilled into the system.
 - The system does not function properly even if you follow the operating instructions.
 - The system was dropped or the cabinet is damaged.
 - The system performance changes.



The warranty does not apply to products that have been disassembled by users.

Safety cautions and warnings

Product disposal notice



IMPORTANT:

This symbol if the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

Nordic Lithium Cautions (for lithium-ion batteries)



CAUTION:

Danger of explosion if battery is incorrectly replaced only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Product disposal notice



- 1. Do not place this product underneath heavy loads or in an unstable position.*
- 2. Do not use or expose this product around magnetic fields as magnetic interference may affect the performance of the product.*
- 3. Do not expose this product to high levels of direct sunlight, high humidity or wet conditions.*
- 4. Do not block the air vents to this product or impede the airflow in any way.*

PoE Injector Caution

This product is intended to be supplied by an UL Listed POE power source which is separated from AC mains by double or reinforced insulation, with minimum rated 55 Vdc, 1.1 A, Tma =40 degree C and the altitude of operation = 2000m and LPS or PS2 requirements.

If need further assistance, please contact ECS IPC for further information.

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Chapter 1

Introducing the PC

Introduction

Now introducing the new ARM based Android 12-compatible system – **LIVA X3A**. It is ideal for various embedded verticals. Equipped with Rockchip 3588, quad-core 2.4GHz, X3A has built-in LPDDR5 8GB memory and 64GB eMMC. SD card reader is also available for convenient storage expansion. It not only has 4 built-in HDMI ports for output display but also supports 4K video playback at 60Hz via HDMI 2.0 port. Featuring Mini Matrix design, X3A is able to provide power over Ethernet, PoE. You have the option to completely omit the setup of power cord and adapter.



LIVA X3A

Note: ID design and specification may vary, please refer to actual goods you purchase.

Specifications

CPU	<ul style="list-style-type: none"> • RK3588
Memory	<ul style="list-style-type: none"> • 8GB LPDDR5
Storage	<ul style="list-style-type: none"> • eMMC 64GB
WLAN + BT	<ul style="list-style-type: none"> • - 2T2R, IEEE 802.11ax + BT5.3 - PCIe + UART
Antenna	<ul style="list-style-type: none"> • 2 x Dipole Antenna
Video output	<ul style="list-style-type: none"> • 4 x HDMI port (4K*3 +1080P*1), with CEC function (power on/off)
Button	<ul style="list-style-type: none"> • 1 x power button w/blue LED
Power Supply	<ul style="list-style-type: none"> • 19V, 45W Adapter W/lock - Model: FSP/FSP045-RBBN3

I/O Ports	<ul style="list-style-type: none"> • 4 x USB 3.2 Gen1 port (Type A) • 2 x LAN port <ul style="list-style-type: none"> - LAN1 support PoE: Input Rating 55V, 1.1A • 1 x 10pin Phoenix connector. for RS232 / 422 / 485, Recovery, Reset, Power (This is a professional application. Please have it operated by professionals.) • 1 x Audio combo jack • 1 x DC-in jack w/lock • 2 x SMA port for WLAN Dipole antennas • 1 x Micro SD • 1 x Screw hole for Grounding • 1 x Kensington lock
Thermal	<ul style="list-style-type: none"> • Fanless
Dimension	<ul style="list-style-type: none"> • 109 x 68 x 50mm
OS Support	<ul style="list-style-type: none"> • Android 12
Application	<ul style="list-style-type: none"> • Content Sync-Digital signage application
Installation	<ul style="list-style-type: none"> • Din rail
Temperature	<ul style="list-style-type: none"> • 0 ~ 40°C
Optional PoE	<ul style="list-style-type: none"> • 60W IEEE802.3bt PD module • Box size: 109 x 68 x 50mm
Optional LTE	<ul style="list-style-type: none"> • M.2 B key slot w/dipole Ant. *2pcs • Nano SIM card slot • Box size: 109 x 68 x 50mm

NOTE: The rating label of the device attached on the bottom of device.

Multiview

Main box

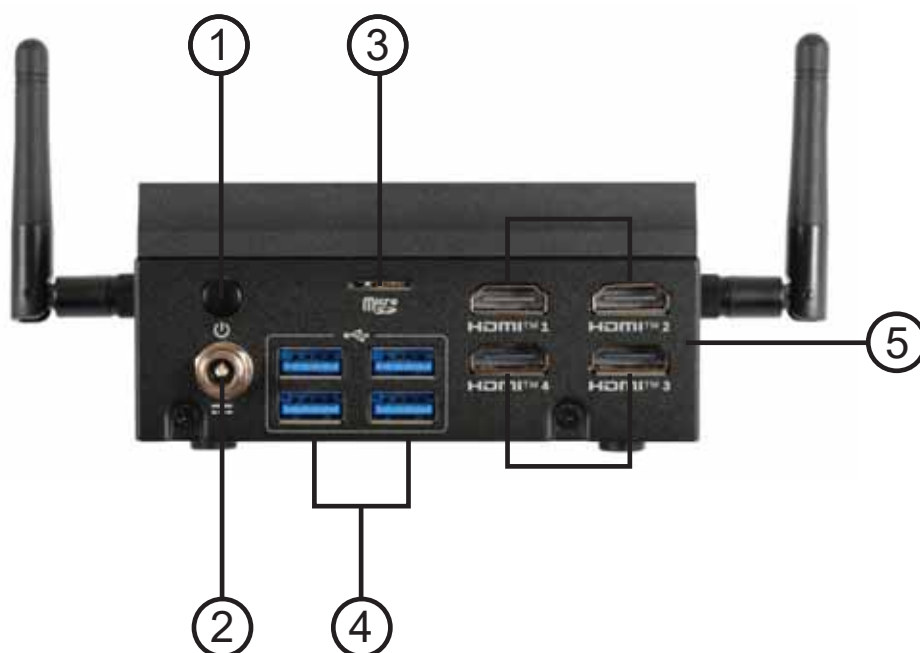


Integrate with optional box

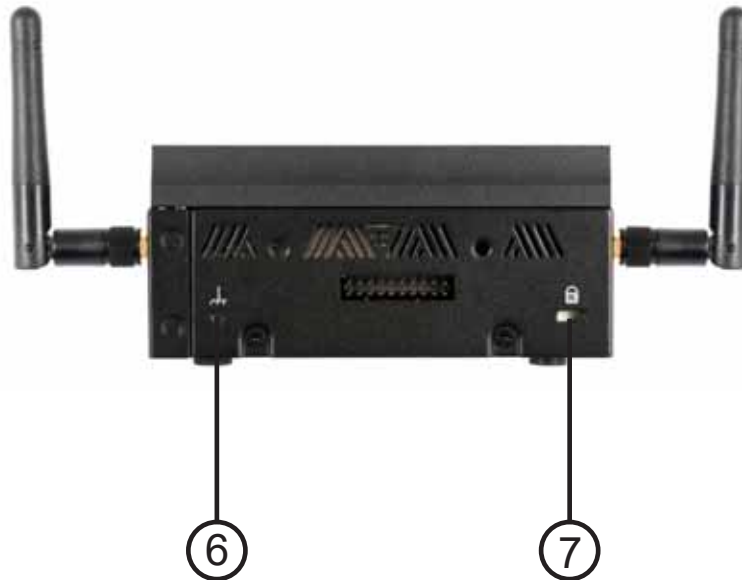


Front and Rear I/O

Front



- | | |
|-------------------------|--|
| 1. Power Button | Use this button to power on/off the system. |
| 2. DC Jack | Connect the power adapter to the DC jack port and tighten them firmly. |
| 3. Micro SD | This is Micro SD card slot. |
| 4. USB 3.2 GEN 1 | Connecting USB 3.2 GEN1 compatible devices. |
| 5. HDMI 1~4 | Connecting a display device to the HDMI port. |

Back**6. Grounding**

This is the screw holes of M2.5mm for Grounding.

7. Kensington lock

This is the security lock.

Side I/O

Left side



- 8. LAN1**
(Support PoE;
optional)

Attach Ethernet cable to this port.
(PoE Input Rating 55V,1.1A)

- 9. LAN2**

Attach Ethernet cable to this port.

Right side**10. Audio Jack**

Connecting the Audio Combo Jack.

11. Phoenix conn

Connect the RS232/422/485, Recovery, Reset, Power to the Phoenix conn port.

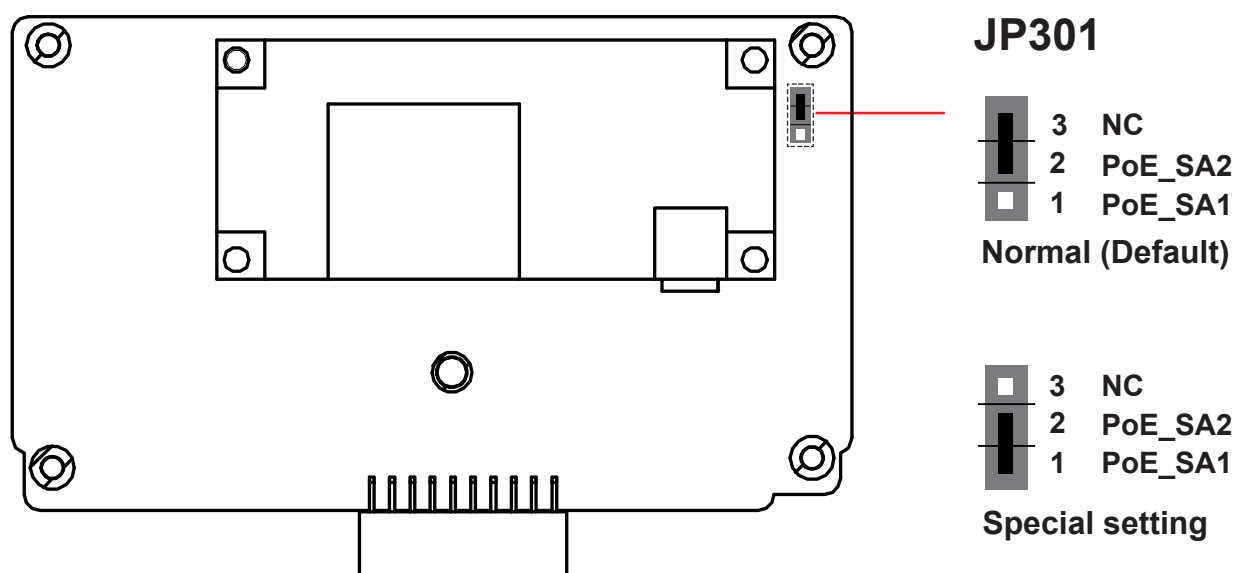
(This feature requires operation by professional personnel.)

Precautions for PoE chargers

The default pin setup is SA2/SA3; however, should you decide to use Pihong POE80U or POE60U, you must switch from SA2/SA3 to SA1/SA2 instead. Such change requires the opening of X3A cover and must be done by trained technicians only.


Note:

It should not be connected to an Ethernet network with outside plant routing.



Phoenix connector pin definition

This is a professional application. Please have it operated by professionals.

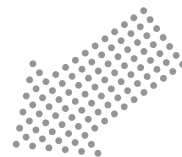
Pin No.	Signal Name	Recovery	PWR	RST	Diagram
		Connect pin3, 4	Connect pin4, 5	Connect pin4, 6	
1	Debug pin				
2	Debug pin				
3	KEY_RECOVERY#	V			
4	GND	V	V	V	
5	KEY-_PWR#		V		
6	KEY-_RST#			V	
Pin No.	Multi-Function (Select by SW)	RS-232	RS-485	RS-422	
7	232TXD/422RX+	TXD	N/A	RX+	
8	232RTS#/422RX-	RTS	N/A	RX-	
9	232RXD/422TX+/ 485RX+TX+	RXD	TX+	TX+	
10	232CTS#/422TX-/ 485RX-TX-	CTS	TX-	TX-	

Chapter 2

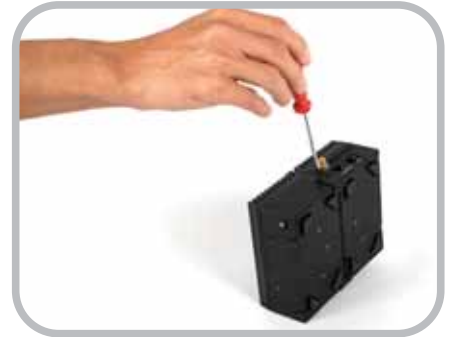
How to combine two boxes and install WLAN dipole antennas

The second box is an optional accessory box. If you have purchased this optional box, please refer to the following:

1. Connecting X3A's male pin header onto its accessory box's female pin header.



2. Attach the mounting bracket onto one side of the unit and secure it with two M2.5 screws.



3. Complete the setup by attaching the 2nd mounting bracket onto the other side and screwing the 2 remaining screws into X3A.



4. Finally, attach the external WLAN antenna.



Chapter 3

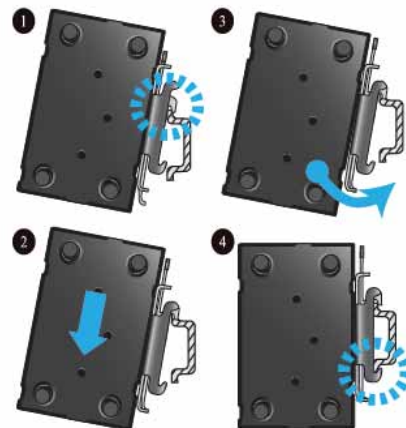
How to install din rail

There are two sides you could choose and attach the din rail clip onto: bottom or side; you may decide on the position base on your requirements.

1. X3A only

The example below demonstrates installing din rail clip onto the bottom of X3A.

► Din rail mounting



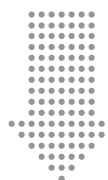
- A. First, turn the main unit onto its back. Take out the din rail clip from the accessory package and align it with mounting holes. Then, take two M4 screws from the accessory package and tighten them sequentially.



- B. Position the unit at an angle to clip the two inner hooks of the din rail clip onto the upper edge of the track. Press downward with force, allowing the lower hooks to clip onto the track, thus completing the installation.



Pull down and hook



2. X3A and its accessory box

The example below demonstrates installing din rail clip onto the bottoms of X3A and its accessory box.

- A. First, turn LIVA X3A and accessory box bottoms up, and take out the din rail clip from the accessory package. Align the clip with mounting holes as shown in the image below.



- B. Take out two M4 screws from the accessory pack and tighten them chronologically.



- C. Tighten the dipole antennas.



- D. Position the unit at an angle to clip the two inner hooks of the din rail clip onto the upper edge of the track. Press downward with force, allowing the lower hooks to clip onto the track, thus completing the installation.



Pull down and hook

