ARMPAC-6XXA Series

Industrial Plastic Chassis, Fanless HMI, w/NXP® i.MX8M+, 4xCortex-A53

User Manual

Release Date	Revision
Dec. 2023	**V1.0**

Revision History

Reversion	Date	Description
1.0	2023/12/19	Official Version

Warning!_____

> This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

> Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

Caution
Risk of explosion if the battery is replaced with an incorrect type.
Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.

Disclaimer
This information in this document is subject to change without notice. In no event shall Aplex Technology Inc. be liable for damages of any kind, whether incidental or consequential, arising from either the use or misuse of information in this document or in any related materials.

Packing List

Accessories (as ticked) included in this package are:
☐ Adaptor
☐ Driver & manual CD disc
☐ Other._____(please specify)

Safety Precautions

Follow the messages below to prevent your systems from damage:

◆ Avoid your system from static electricity on all occasions.

◆ Prevent electric shock. Don't touch any components of this card when the card is power-on. Always disconnect power when the system is not in use.

◆ Disconnect power when you change any hardware devices. For instance, when you connect a jumper or install any cards, a surge of power may damage the electronic components or the whole system.

Table of Contents

Chapter 1   Getting Started

Chapter 2   Hardware

Chapter 3   Software images

Figures

Chapter 1 Getting Started

1.1 Features

- ARM based HMI

- Fanless design

- Flat front panel touch screen

- NXP® i.MX8M Plus Quad, w/4xCortex-A53 processor

- Onboard 4GB LPDDR4 DRAM

- Onboard 16GB/32GB eMMC Flash

- DC 24V power input

1.2 Specifications

	ARMPAC-607A(P)	ARMPAC-610A(P)
System		
CPU	NXP® i.MX8M Plus Quad, 4x Cortex-A53 up to 1.6 GHz	
Memory	Onboard 4GB LPDDR4 DRAM	
External IO Port		
USB	1 x USB 3.0/USB2.0, via vertical USB type-A port 1 x USB 2.0 download mode via Micro USB port	
Serial/CAN Bus	1 x Pitch 3.5mm 2x5pin terminal block with ● 1 x RS232(RX,TX,RTS,CTS)/2W RS485(D+,D-),select via jumper ● 1 x 2W RS485(D+,D-) ● 1 x CAN bus 2.0b(CAN_H,CAN_L)	

*Required Label for pin assignment as following.

	GND	CTS	RTS	TX/485-	RX/485+
COM1	GND	CTS	RTS	TX/485-	RX/485+
COM2	GND	CAN_H	CAN_L	485-	485+

Pin#	COM1(RS232)	COM1(RS485)	COM2(RS485/CAN)
1			GND
2	GND		
3			CAN_H
4	CTS		

	5			CAN_L	
	6	RTS			
	7			485-	
	8	TX	485-		
	9			485+	
	10	RX	485+		
LAN	1 x GbE Lan,RJ45 (LAN1),support optional PoE+(IEEE 802.3AT) PD via module (Model: Silvertel_AG5300) 1 x GbE Lan,RJ45 (LAN2)				
Power	1 x 24V DC power input via 1 x 3-pin terminal block				
Option	Onboard Wifi/BT module 2.4GHz, 5.0 GHz IEEE 802.11 b/g/n/ac wireless Bluetooth 5.0, BLE				

RTC Battery

RTC Battery	CR2032

Switch

Switch	1 x 2*2pin Switch for burning mode & boot device select (eMMC/SD)

LED Indicator

LED Indicator	1 x System LED	
	System Status	LED Status
	System On	Green Solid
	Sleep Mode	Green Blinking
	Power Off	LED OFF

Storage Space

Storage	Onboard 16GB/32GB eMMC Flash 1 x Micro SD Slot(push-push type micro SD slot)

Expansion

Expansion Slot	1 x M.2 B-Key (USB3.0, USB2.0) support 3042/3052, w/clamshell NANO SIM slot, for 4G LTE 1 x M.2 E-Key (PCIe3.0x1, USB2.0) support 2230 for WiFi/BT

Display

Display Type	7" color TFT LVDS LCD	10.1" color TFT LCD
Resolution	800x480	1280x800
Max. Color	262K	TBD
Luminance	400	350
Contrast Ratio	400: 1	800: 1
Viewing Angle	140(H)/140(V)	170(H)/170(V)

| Backlight Lifetime	20,000 hrs	30,000 hrs
Touch Screen – Projected Capacitive Type		
Interface	USB	
Light Transmission	88±2%	
Power		
Power Input	DC24V	
Connector	Pitch 3.5mm 3pin Phoenix Connector	
Power Consumption	MAX: 8.9W (607A)	MAX: 10.29W (610A)
Mechanical		
Front Bezel Metal	Plastic/Panel Mount	
Rear Panel Metal	Plastic/VESA 75	Plastic/VESA 75
Chassis Color	Black C	
IP Rating	IP65 Front Panel (Panel Mount)	
Dimensions(mm)	204 x 150 x 46	269 x 189 x 49.5
Net Weight (Kg)	0.65	0.9
Environmental		
Operating Temperature	0~50℃ (-20~60℃ option)	
Storage Temperature	-30~70℃	
Humidity	10 to 95% @ 40℃, non-condensing	
Certification	CE / FCC Class A	
Operating System	Yocto Linux 4.0 (Kernel 5.15.71)/ANDROID 11 (Default)	

1.3 Dimensions
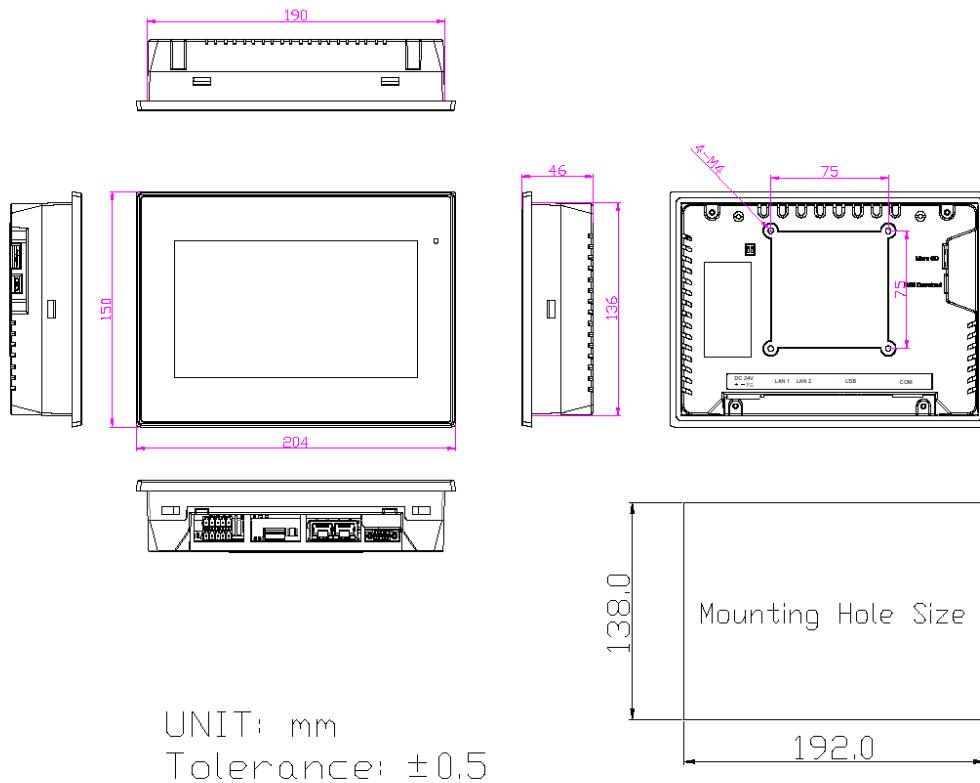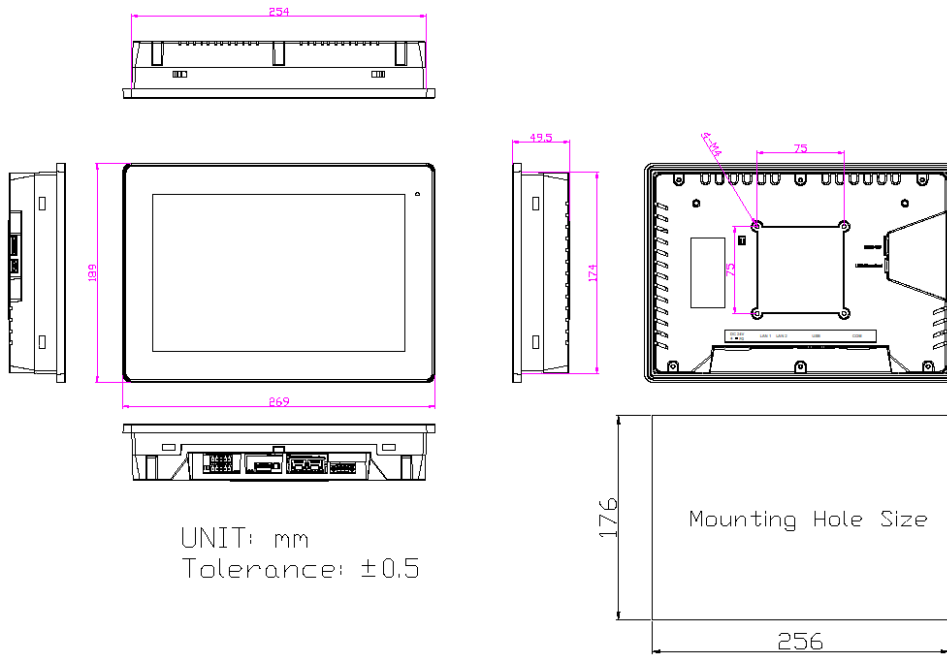

Figure 1.1: Dimensions of ARMPAC-607A(P)

Figure 1.2: Dimensions of ARMPAC-610A(P)

1.4 Brief Description of ARMPAC-6XXA

ARMPAC-6A series have 7", and 10.1" in fanless designed ARM based HMI, which comes with flat front panel LED backlight touch designed. They are powered by NXP® i.MX8M Plus Quad, 4x Cortex-A53 processor, 4GB LPDDR4 onboard memory, and 16GB eMMC or 32GB eMMC NAND flash onboard. ARMPAC-6XXA series is DC 24V power input and IP65 front panel. The 7", and 10.1" model can be VESA 75 x 75 mounted. The chassis color is Black C for plastic design in 7" and 10.1". Default projected capacitive touch screen supports 7H anti-scratch surface is ideal for use as Web HMI for industrial automation & factory automation.
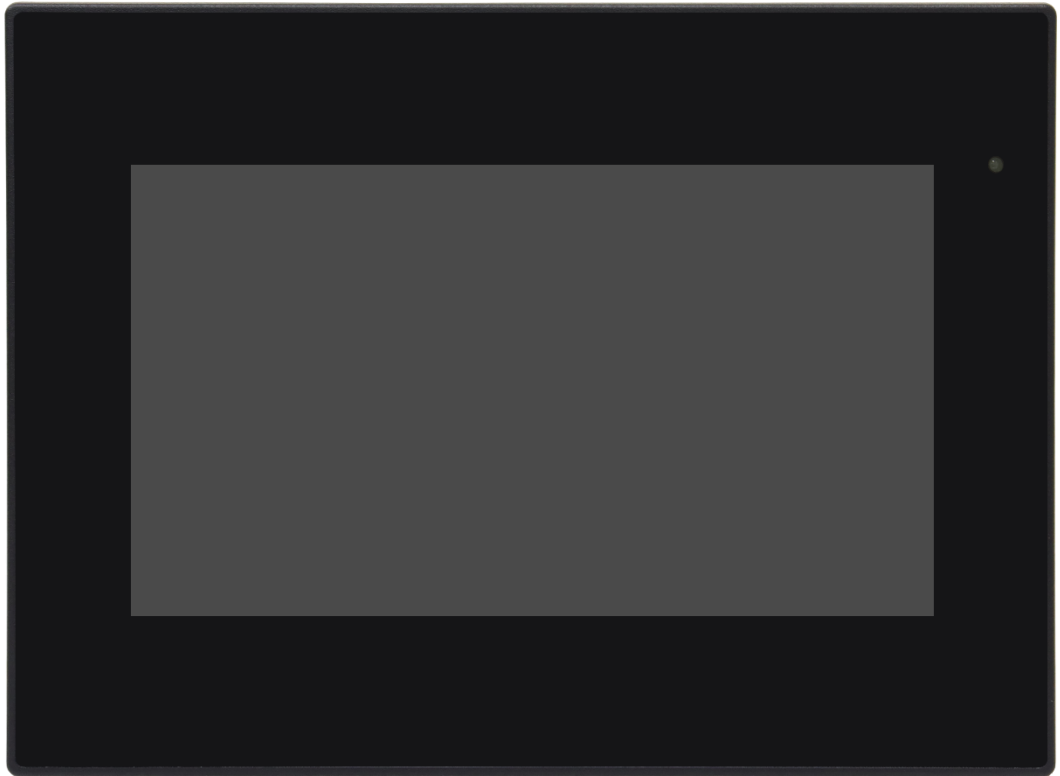
Figure 1.3: Front View of ARMPAC-6XXA Series

Figure 1.4: Rear View of ARMPAC-6XXA Series

1.5 VESA Mounting

The ARMPAC-6XXA series is designed to be VESA mounted as shown in Picture. Just carefully place the unit through the hole and tighten the given screws from the rear to secure the mounting.
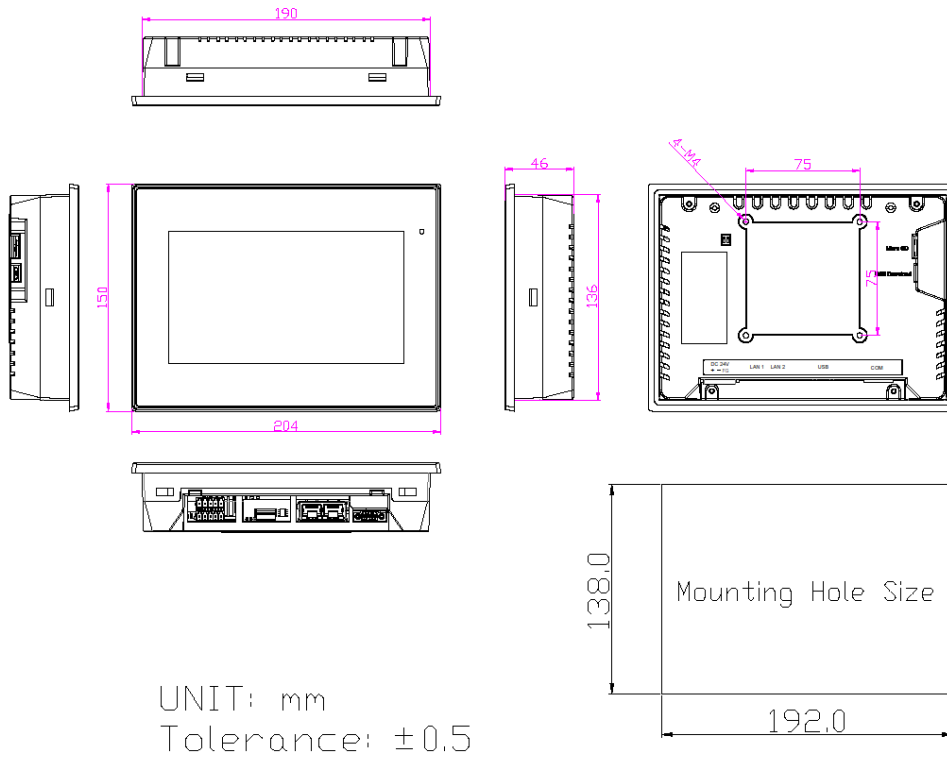

Figure 1.5: ARMPAC-6XXA Series VESA Mounting

Chapter 2   Hardware

2.1 Motherboard Introduction

SBC-7132 is an industrial motherboard developed on the basis of NXP i.MX8M plus processor, which designed for Aplex standard system the ARMPAC-6A & ViTAM-6A series.

2.2 Motherboard Specifications

SBC-7132_Industrial Motherboard	
Form Factor	3.5" ECX
System	
Processor	NXP® i.MX8M Plus Quad, 4x Cortex-A53 up to 1.6 GHz
Memory	Onboard 4GB LPDDR4-4000 DRAM
Storage	Onboard 16GB eMMC Flash 1 x Micro SD Slot
Graphics	
LVDS	1 x 18/24-bits Dual Channel LVDS
LVDS & Touch Screen	LVDS, backlight control, backlight power, USB2.0(for touch screen), 1 x System LED See table below via DF13-40DP-1.25V
I/O	
I/O	1 x USB 3.0/USB2.0, via vertical USB type-A port 1 x USB 2.0 download mode via Micro USB port
Ethernet	1 x GbE Lan,RJ45 (LAN1),support optional PoE+(IEEE 802.3AT) PD module 1 x GbE Lan,RJ45 (LAN2) LAN LED Status: See table below

LVDS & Touch Screen — System LED:

System Status	LED Status
System On	Green Solid
Sleep Mode	Green Blinking
Power Off	LED Off

Ethernet — LAN LED Status:

LED Color	Green(Left)	Orange(Right)
GbE	NA	Solid
100Mbps	Solid	Solid
10Mbps	Solid	Solid

Serial Port & CAN bus	1 x Pitch 3.5mm 2x5pin Terminal Block with ➤ 1 x RS232(RX,TX,RTS,CTS)/2W RS485(D+,D-),select via jumper ➤ 1 x 2W RS485(D+,D-) ➤ 1 x CAN bus 2.0b(CAN_H,CAN_L) 1 x RS232 via 2x5pin header 1 x CAN via 1x4 wafer (CAN_H,CAN_L,GND,5V) (Optional)
Audio (Optional)	Line-in, mic-in, line-out via 2x6pin header Support 2x2W speaker (SPKL1/SPKL2)
GPIO	8-bit GPIO(4xDI,4xDO) via 2x5 pin header
I^{2}C	I^{2}C via 1x4 pin wafer
Expansion Slot	1 x M.2 B-Key (USB3.0, USB2.0) support 3042/3052, w/clamshell NANO SIM slot 1 x M.2 E-Key (PCIe3.0x1, USB2.0) support 2230 for WiFi/BT
RTC Battery	2pin wafer for CR2032
Mode Select	1x2*2pin dip switch for burning mode & boot device select (eMMC/SD)

Power Management	
Operation Voltage	DC 24V (+/-10% tolerance) power input
Connector	Pitch 3.5mm 3pin terminal blocks

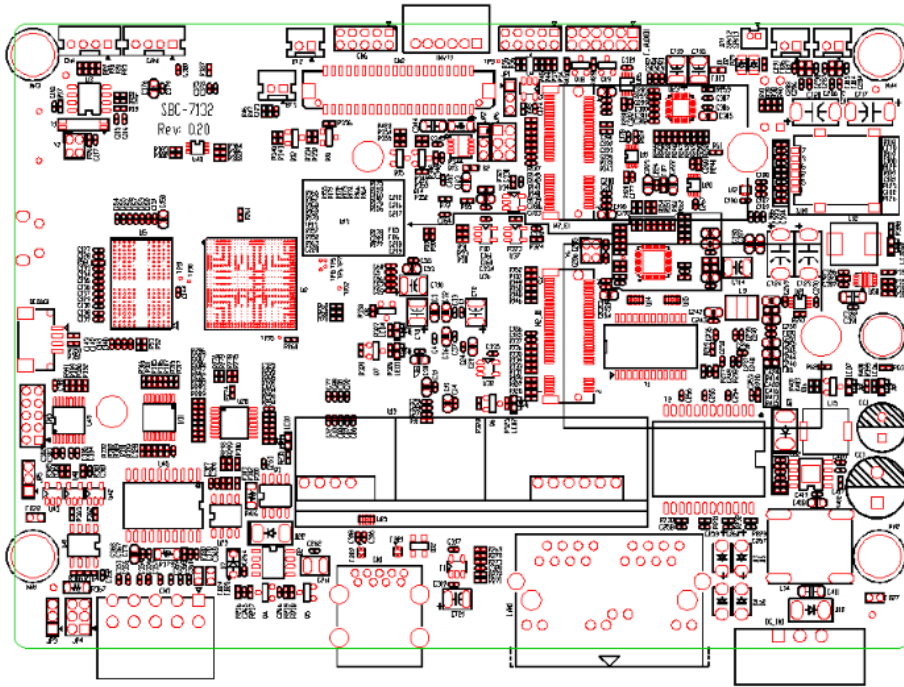| Mechanical	
Dimension	146mm x 102mm
Gross Weight	TBD

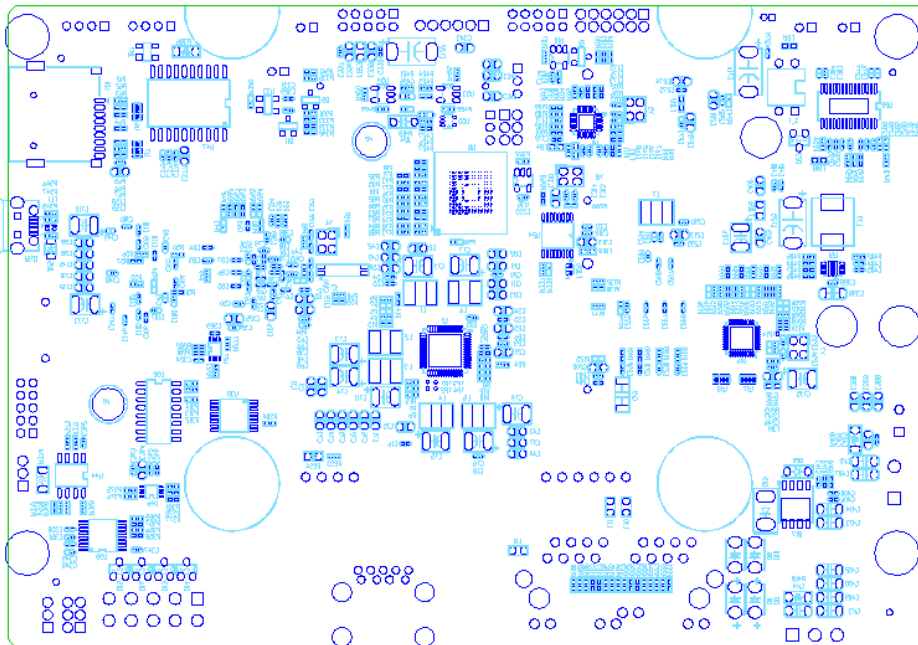| Power Management	
Operation temperature	-30~70°C
Storage temperature	-40~85°C
Storage humidity	10 to 95%, non-condensing, operating
Certifications	<u>Design Meet</u> CE / FCC Class A UKCA RoHS2.0/REACH

OS System	
Android	Android 11
Linux	Yocto Linux 4.0 (kirkstone)

2.3 Motherboard Dimensions

Board Top
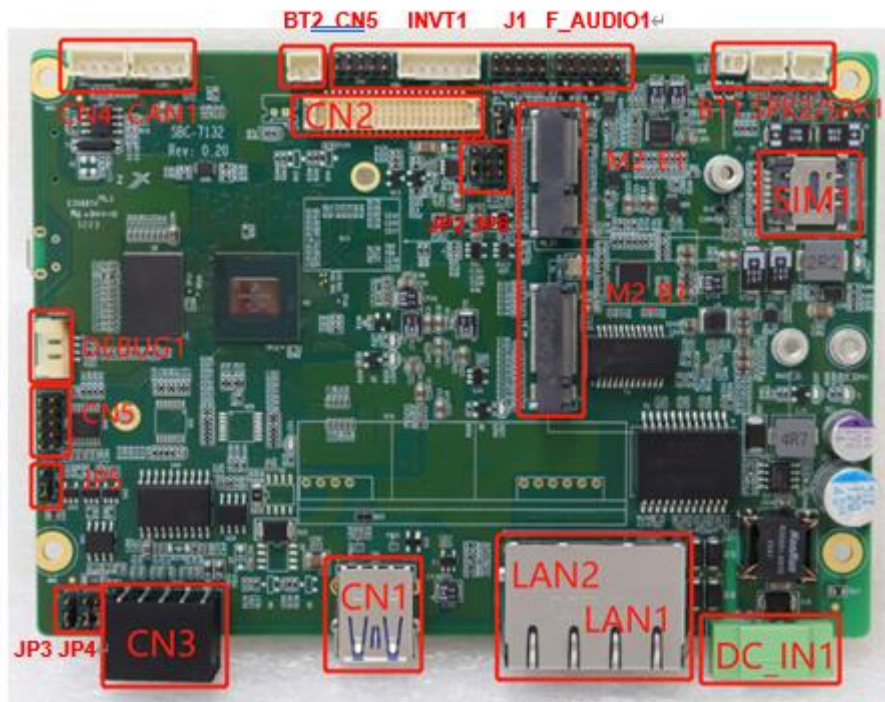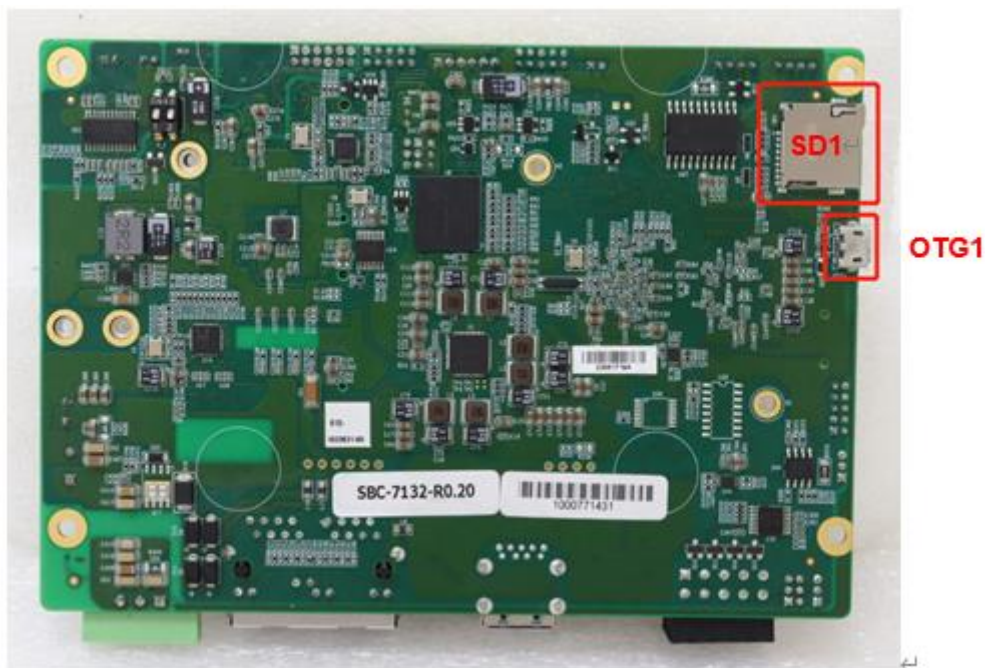

Board Bottom

2.4 Motherboard Jumpers and Connectors Location
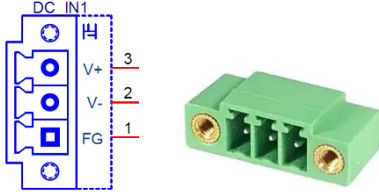
Board Top

Board Bottom

2.5 Motherboard Jumpers and Connectors

1. DC_IN1:

(3.50mm Pitch Dinkle_ECH350RM-03P), For DC 24V system power input.

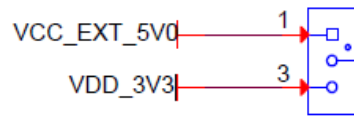| Pin#	Signals
1	FG
2	DC_IN-
3	DC_IN+

2. CN1:

(USB type A), USB3.0/USB2.0

3. CN2:

(1.25mm pitch Hirose_DF13-40DP-1.25V), Provides 18/24-bits dual channel LVDS, LCD backlight power and control, system LED and USB2.0 for touch screen.

Function	Signal Name	Pin#		Signal Name	Function
DC12/24V for LCD backlight	DC 12V/24V	2	1	DC 12V/24V	DC12/24V for LCD backlight
LVDS Signals	BKLT_EN	4	3	BKLT_CTRL	LVDS Signals
	GND	6	5	GND	
	LVDS_VCC*	8	7	LVDS_VCC*	
	LVDS_VCC*	10	9	LVDS_VCC*	
	GND	12	11	GND	
	LA_D0_P	14	13	LA_D0_N	
	LA_D1_P	16	15	LA_D1_N	
	LA_D2_P	18	17	LA_D2_N	
	LA_D3_P	20	19	LA_D3_N	
	LA_CLKP	22	21	LA_CLKN	
	LB_D0_P	24	23	LB_D0_N	
	LB_D1_P	26	25	LB_D1_N	

	LB_D2_P	28	27	LB_D2_N	
	LB_D3_P	30	29	LB_D3_N	
	LB_CLKP	32	31	LB_CLKN	
USB3	GND	34	33	GND	USB3
	USB3_CN1_P	36	35	USB3_CN1_N	
	5V	38	37	NC	
LED	PWR_LED+	40	39	ERRLED+	LED

*JP2

JP2 Pin#	Function
1-2 Close	LVDS_VCC=5V
2-3 Close	LVDS_VCC=3.3V

4. INVT1:
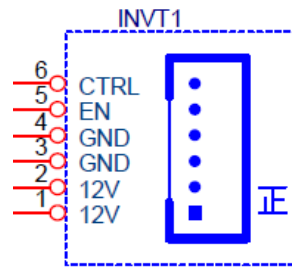
5. CN3：

(3.50mm pitch Dinkle_0221-2210THT),
Provides 2xCOM(COM1:RS232/485,COM2:RS485) and 1xCAN Bus.

Function	Signal Name	Pin#	Pin#	Signal Name		Function
COM2* (JP5) CAN Bus	GND	1	2	GND		COM1* (JP3/JP4)
	CAN0_H	3	4	COM1_CTS		
	CAN0_L	5	6	COM1_RTS		
	485-	7	8	COM1_TX	485-	
	485+	9	10	COM1_RX	485+	

*JP3

JP3 Pin#	Function
1-2 Close	COM1 Add Terminal

*JP4

JP4 Pin#	Function
1-3/2-4 Close	COM1 RS232
3-5/4-6 Close	COM1 RS485

*JP5

JP5 Pin#	Function
1-2 Close	COM2 Add Terminal

6. **CN4**：
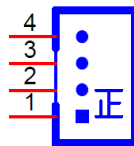
(2.00mm pitch 4pin wafer), Provides I2C signal.

Pin#	Signal Name
1	GND
2	I2C_SCL
3	I2C_SDA
4	5V_S0

7. **CN5：**

   (2.00mm pitch 2x5pin header), Provides COM3 RS232.

Signal Name	Pin#		Signal Name
NC	1	2	RX
TX	3	4	NC
GND	5	6	NC
RTS	7	8	CTS
NC	9	10	NC

8. **CN6:**

   (2.00mm pitch 2x5pin header), Provides 8-bits GPIO.

Signal Name	Pin#		Signal Name
5V	1	2	GND
GPIO1_IO00	3	4	GPIO1_IO12
GPIO1_IO01	5	6	GPIO1_IO13
GPIO1_IO05	7	8	GPIO1_IO14
GPIO1_IO06	9	10	GPIO1_IO15

9. **CN1:**

   (2.00mm pitch 4pin wafer), Provides 1xCAN Bus.

Pin#	Signal Name
Pin1	GND_IO_1
Pin2	CAN_L
Pin3	CAN-H
Pin4	VCC_IO_1

10. **LAN (LAN1/LAN2):**

(Side by side RJ45 connector UDE_RB2-ZZ-0100-A), Provides 2xGbE LAN. LAN1 supports PoE+ via optional PoE+ module*.
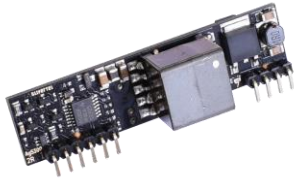
*LAN1 supports PoE+ module Silvertel_AG5300

IEEE802.3at and IEEE802.3af compliant

Maximum 30W peak output power

11. **F_AUDIO1 (Optional):**

      (2.00mm pitch 2x6 pin header), Provides line-in/line-out/mic-in.

Signal Name	Pin#	Pin#	Signal Name
NC	1	2	GND_AUD
HP_OUTL	3	4	HP_OUTR
LINE_OUT_DET	5	6	NC
LINE_IN_L	7	8	LINE_IN_R
MIC_IN_L	9	10	MIC_IN_R
GND_AUD	11	12	NC

12. **SPKL1/SPKL2 (Optional):**

      (2.00mm pitch 2 pin header), Provides up to 2x2W speakers out.

Pin#	Signal Name
Pin1	Speaker+
Pin2	Speaker-

13. **BT1:**

      (1.25mm pitch 2 pin header),For 3.3V RTC battery.

Pin#	Signal Name
Pin1	BAT+
Pin2	GND

14. **JP6:**

      (2x3 pin header),Jumper for backlight control mode setting.

JP6 Pin#	Function	
	Close	Open
1-2	DC mode	PWM mode
3-4	PWM level 5V	PWM level 3.3V
5-6	Backlight enable level 5V	Backlight enable level 3.3V

15. **M2_B1:**

   (M.2 B-Key), With USB3.0/USB2.0 signals. Support 3042/3052 M.2 B-Key expansion cards.

16. **SIM1:**

   (Clam-shell type micro-SIM slot), Support micro SIM card for

M2_B1.

17. **M2_E1:**

   (M.2 E-Key), With PCIe3.0x1/USB2.0 signals. Support 2230 M.2 E-Key expansion cards.
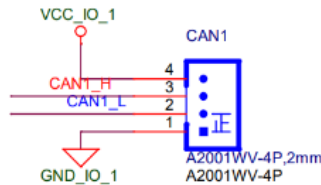
18. **SD1:**

   (Micro SD slot), Support SDXC.

19. **OTG1:**

   (Micro USB), Provide USB OTG function.

20. **J1:**

   (2.00mm pitch 2x5pin header), JTAG function.

21. **CAN1：**

   (2.00mm pitch 4pin wafer), Provides CAN bus signals.

Pin#	Signal Name
1	GND
2	CAN_L
3	CAN_H
4	VCC

22. **BT2(Reserved):**

   (1.25mm pitch 2 pin header),For external power on switch.

Pin#	Signal Name
Pin1	CPUPWRON
Pin2	GND

23. DEBUG1 :
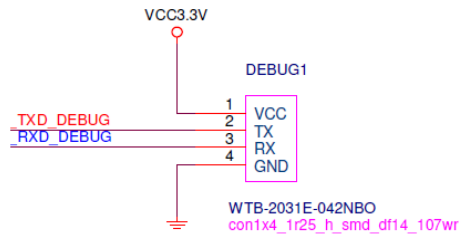
(1.25mm pitch 4pin wafer)),For console debug message only.

Pin#	Signal Name
1	3P3V_S0
2	UART0_TXD
3	UART0_RXD
4	GND

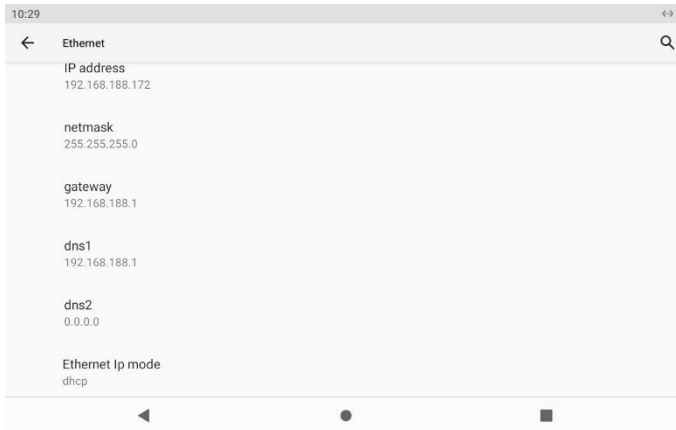# Chapter 3   Software images

3.1 ANDROID11
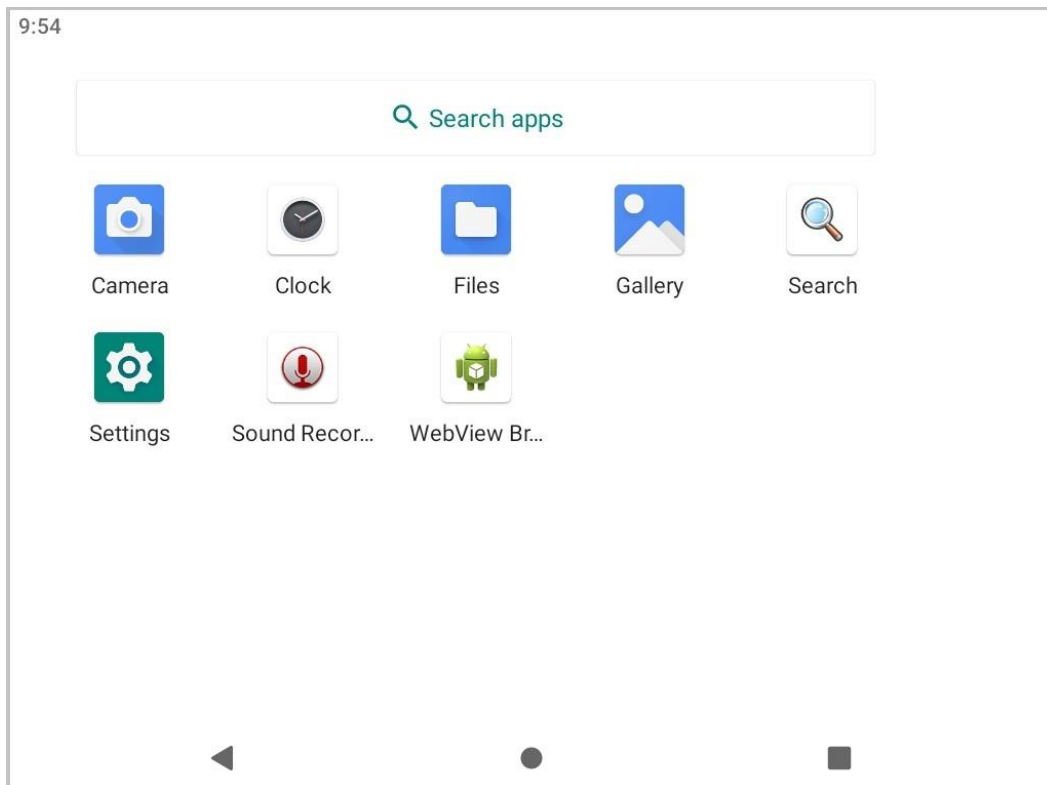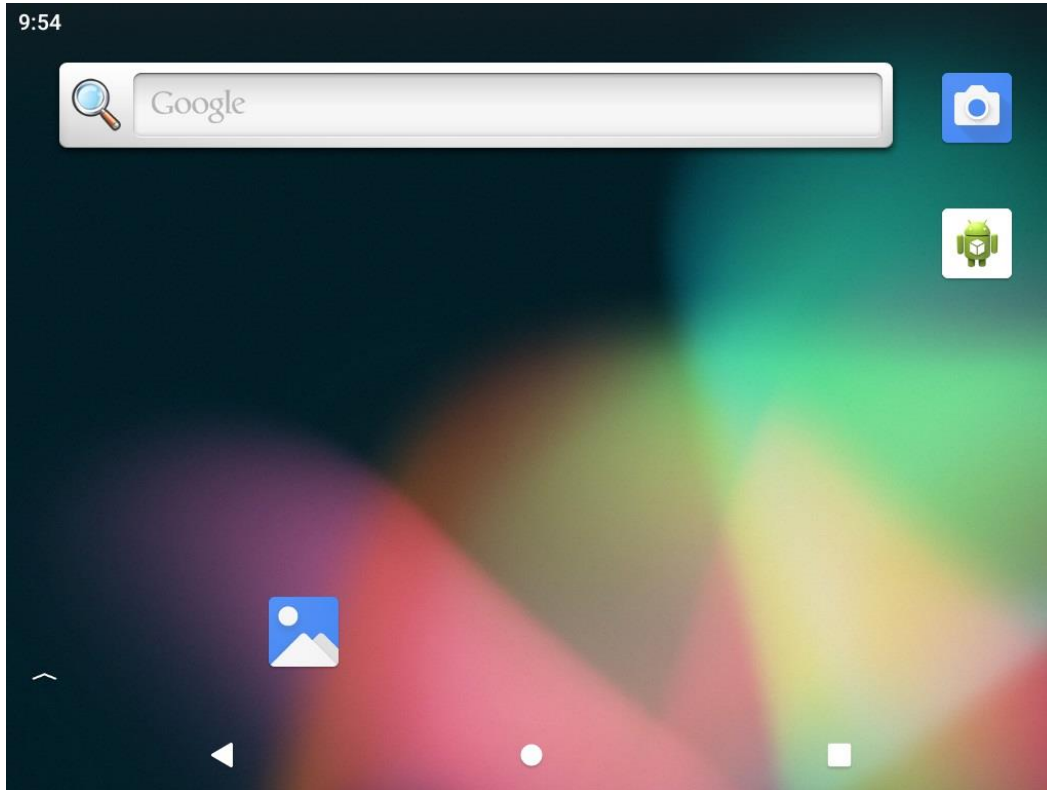
3.1.1. Android 11 Dual Ethernet Connect Check:

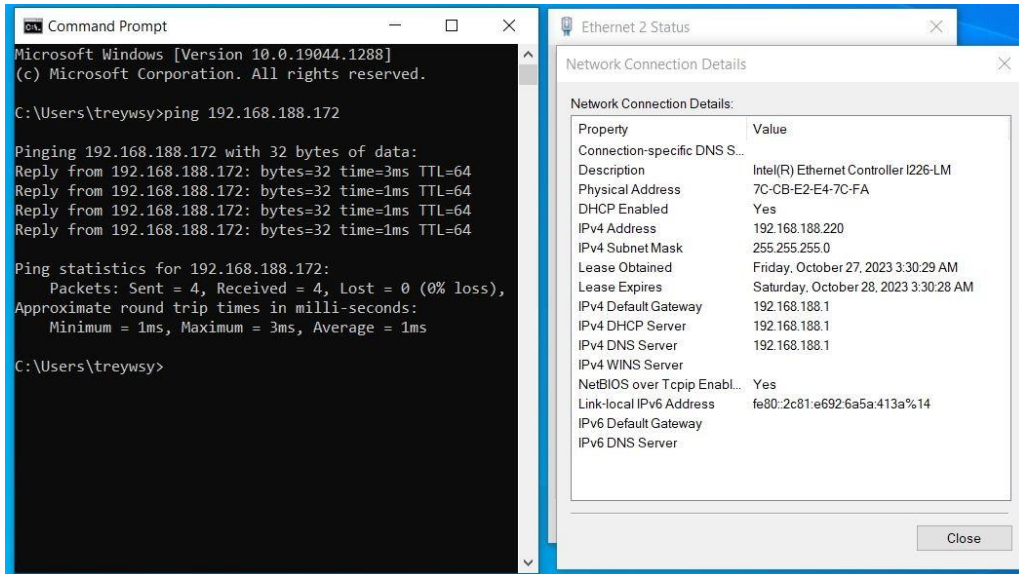**1. DHCP Dual Ethernet Connect Check: Settings => Network & Internet**

➢ **Note: When dual network ports are configured for DHCP connection under the Android 11 operating system, the first network port (LAN1) will be used to connect to the external Internet.**
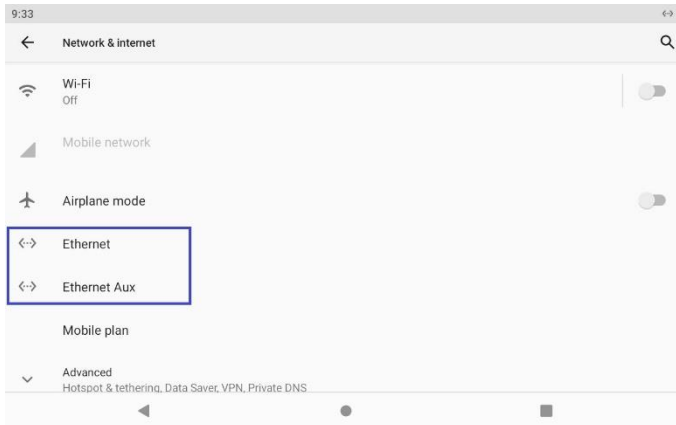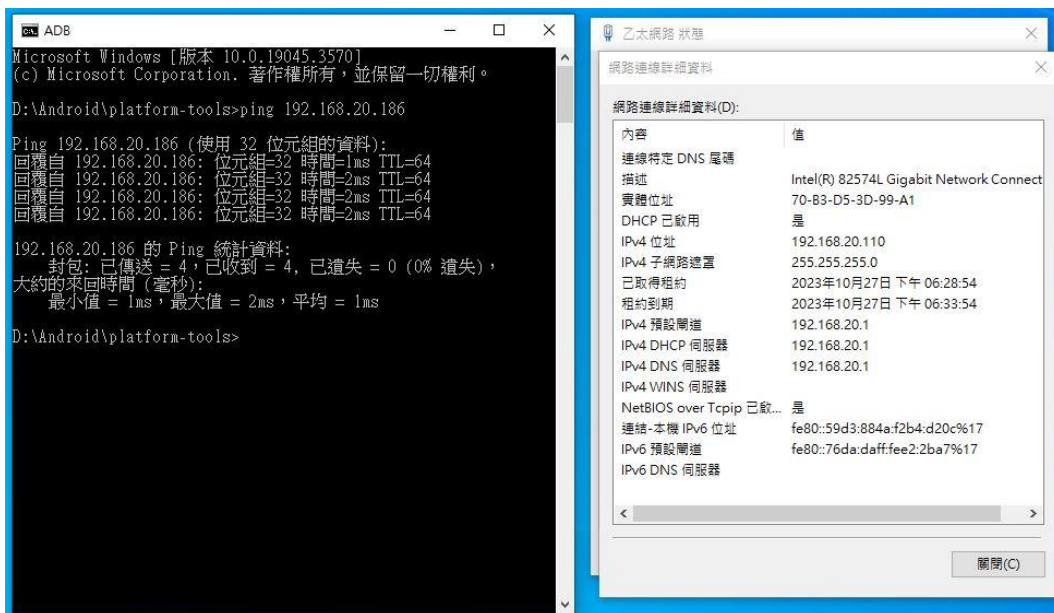

Ethernet (LAN1)

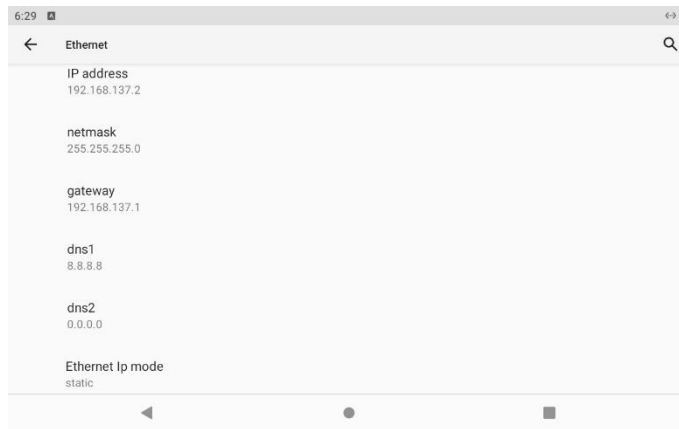**PC-1 pin Android 11 LAN1:**
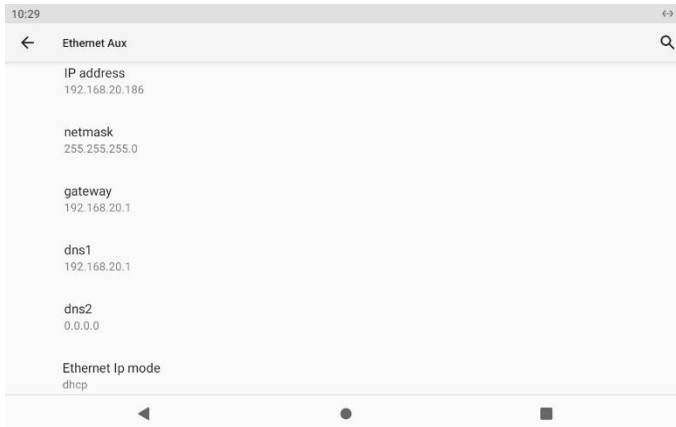
Ethernet AUX(LAN2)

PC-2 pin Android 11 LAN2:

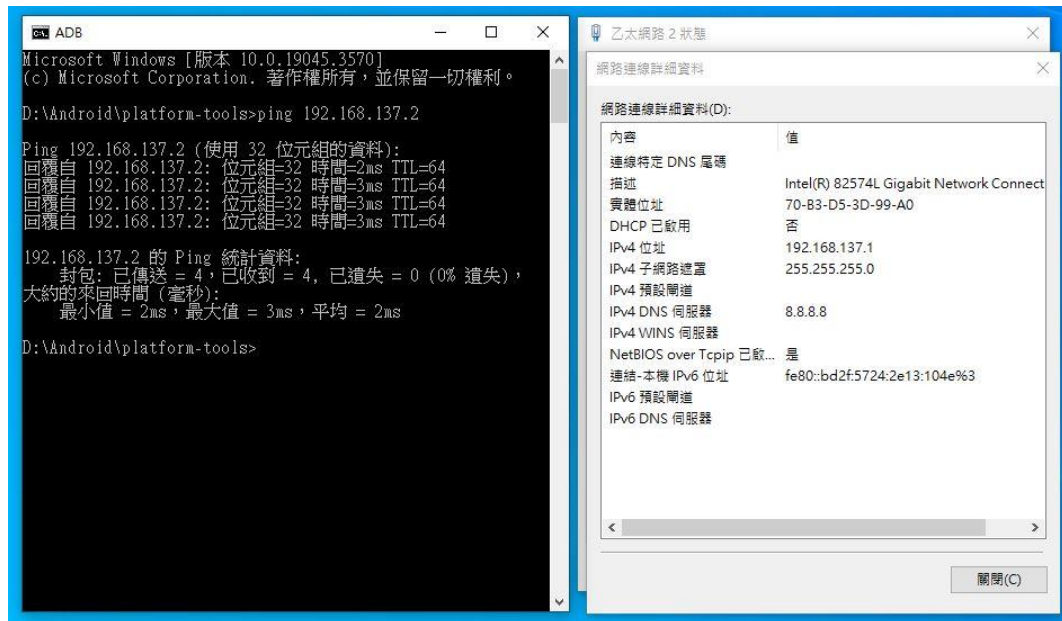## 2. Static IP Dual Ethernet Connect Check: Settings => Network & Internet
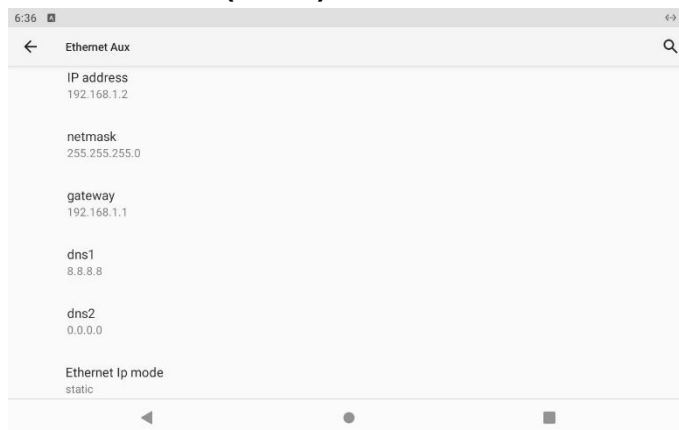
Ethernet (LAN1)

PC-1 pin Android 11 LAN1:
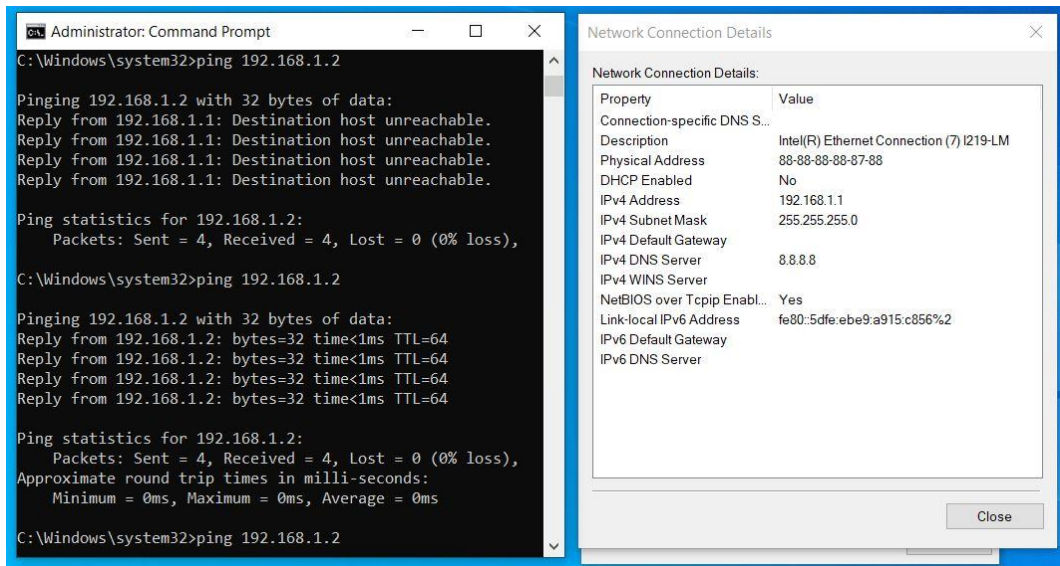

Ethernet AUX (LAN2)

PC-2 pin Android 11 LAN2:

```
Administrator: Command Prompt                    —    □    ×

C:\Windows\system32>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

C:\Windows\system32>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time<1ms TTL=64
Reply from 192.168.1.2: bytes=32 time<1ms TTL=64
Reply from 192.168.1.2: bytes=32 time<1ms TTL=64
Reply from 192.168.1.2: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Windows\system32>ping 192.168.1.2
```

Network Connection Details

Network Connection Details:

Property	Value
Connection-specific DNS S...	
Description	Intel(R) Ethernet Connection (7) I219-LM
Physical Address	88-88-88-88-87-88
DHCP Enabled	No
IPv4 Address	192.168.1.1
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	
IPv4 DNS Server	8.8.8.8
IPv4 WINS Server	
NetBIOS over Tcpip Enabl...	Yes
Link-local IPv6 Address	fe80::5dfe:ebe9:a915:c856%2
IPv6 Default Gateway	
IPv6 DNS Server	

Close

3.2. Yocto Linux 4.0 (kirkstone)

1. **System Login & Setup**

➢ **Press the "Setup" button to enter the setup login page.**

Homepage setup :

Homepage: [   ] example:http://httpproxy.example.com

Apply

Setup

➢ **Default login username/password**

Username: root

Password: rootroot

System Login:

Username: root

Password: ••••••••

Confirm

Home

1.Brightness
2.Datetime
3.Password
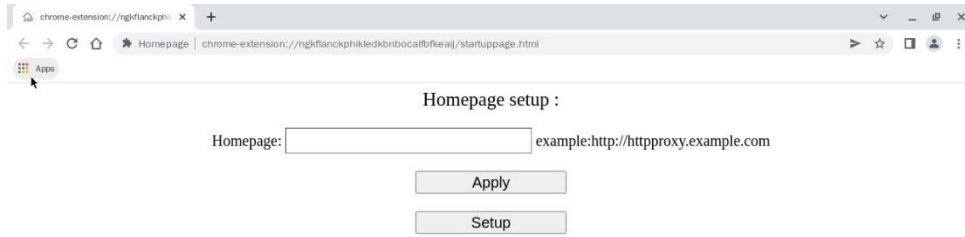4.Homepage
5.Network
6.Check URL
7.Terminal Mode
8.Display Rotation

File System Build Date: 20231027

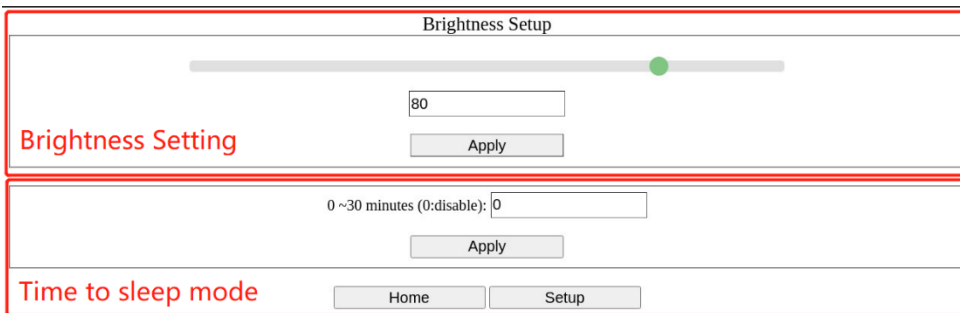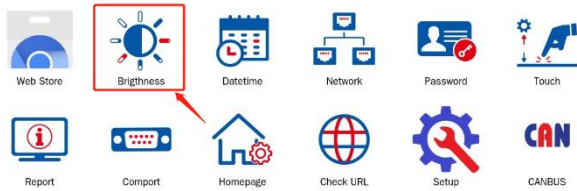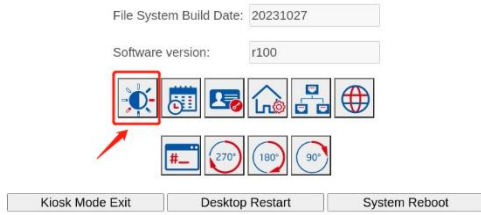Software version: r100

1 2 3 4 5 6

7 8

270° 180° 90°

Kiosk Mode Exit   Desktop Restart   System Reboot

➢ **While not in the Kiosk mode, press the "Apps" button on Chromium.**

Homepage setup :

Homepage: [   ]   example:http://httpproxy.example.com

Apply

Setup
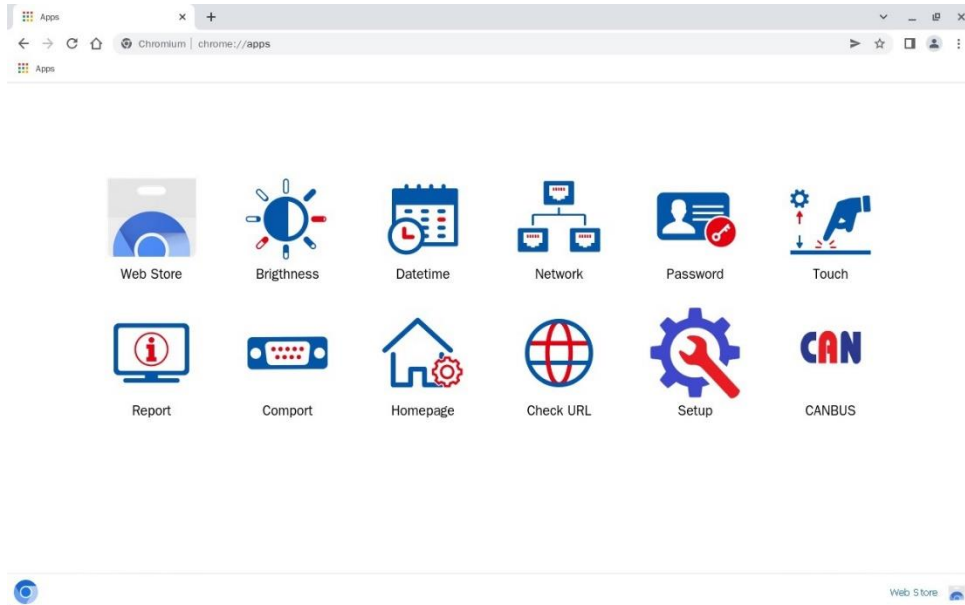
2. Brightness Setting

> ➢ **Brightness can be set from 1~100% via slide bar or directly fill the value.**
> ➢ **Time to sleep mode can be set from 0~30mins or fill 0 to disable.**

3. Date & Time Setting
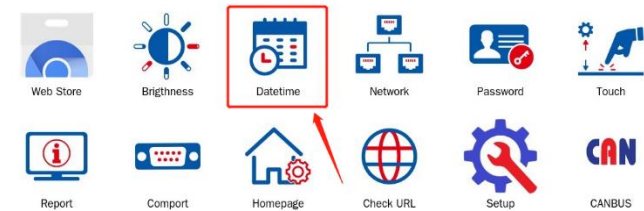
> ➢ **Date 、 time and time zone can be set manually, or can be synchronized automatically by connecting the NTP server.**

Date and Time Setup :

Manual Setup:

| 10/27/2023 | 🗓 |

| 03:21 AM | 🕐 |

Set Date&Time

NTP Server:

| 211.22.103.157 |

Apply

Connect NTP Server

Timezone Setup:

(GMT -2:00) Mid-Atlantic
(GMT -1:00) Azores, Cape Verde Islands
(GMT) Western Europe Time, London, Lisbon, Casablanca

Set Timezone

| Home | Setup |

4. Login Password Setting

| File System Build Date: | 20231027 |
| Software version: | r100 |

Kiosk Mode Exit   Desktop Restart   System Reboot

Web Store   Brigthness   Datetime   Network   Password   Touch

Report   Comport   Homepage   Check URL   Setup   CANBUS

➢ **Please note:**

1. **Password must contain at least eight characters**

2. **Password must contain at least one uppercase letter A-Z**

3. **Password must contain at least one lowercase letter a-z**

4. **Password must contain at least one numeric character 0-9**

Current password:
••••••••

New password:
••••••••

Confirm new password:
••••••••

Apply

Home   Setup

5. Homepage Setting

File System Build Date: 20231027

Software version: r100

Kiosk Mode Exit   Desktop Restart   System Reboot

Web Store   Brigthness   Datetime   Network   Password   Touch

Report   Comport   Homepage   Check URL   Setup   CANBUS

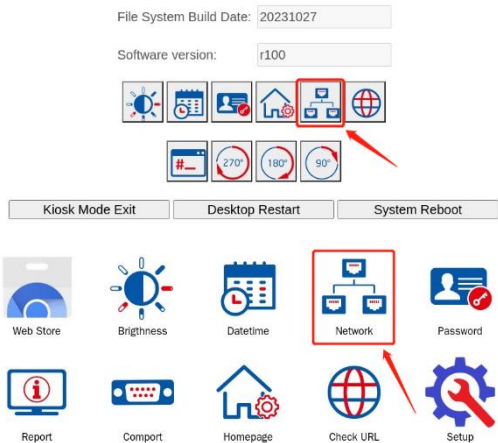➢ **Enter the URL you want to set as the homepage and press the "Apply" button.**

Homepage setup :

Homepage: [   ] example:http://httpproxy.example.com

Apply

Setup

6. Network Setting

Network setting for LAN1(eth0) & LAN2(eth2).

eth0 setup

Ipaddress: 192.168.20.159

Netmask : 255.255.255.0

Gateway : 192.168.20.1

DNS : 192.168.20.1

Type: ◯ Static IP ⦿ DHCP

Apply

Proxy type: ⦿ direct ◯ manual

Proxy: [   ]   example:http://httpproxy.example.com

PROXY-Setup

eth1 setup

Ipaddress: [   ]

Netmask : [   ]

Gateway : [   ]
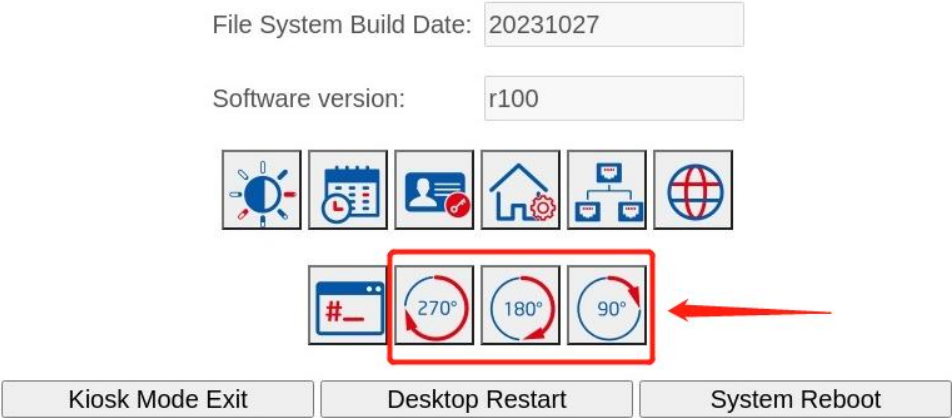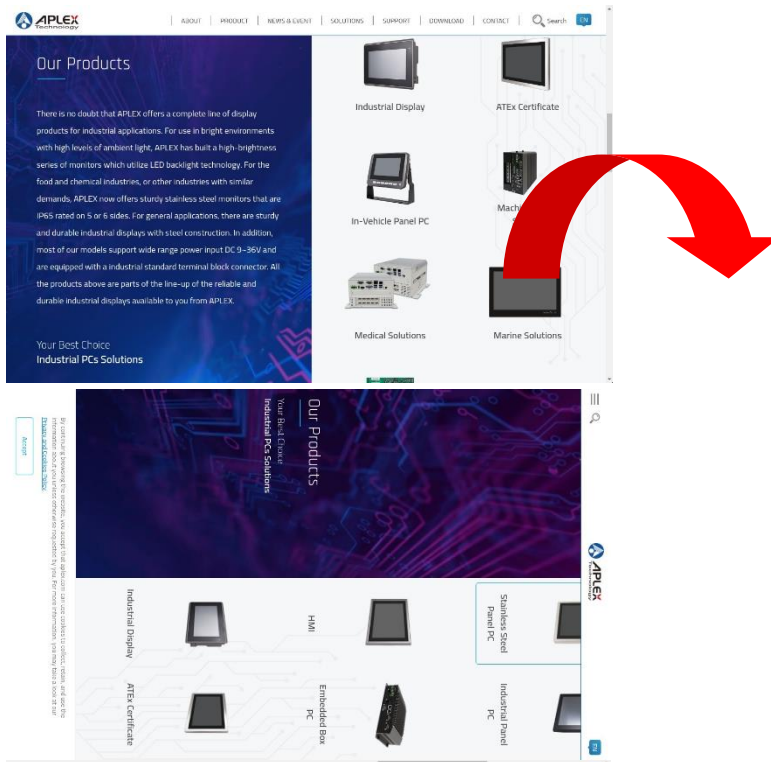
DNS : [   ]

Type: ◯ Static IP ◯ DHCP

Apply

7. Terminal Mode

File System Build Date: 20231027

Software version: r100

Kiosk Mode Exit   Desktop Restart   System Reboot
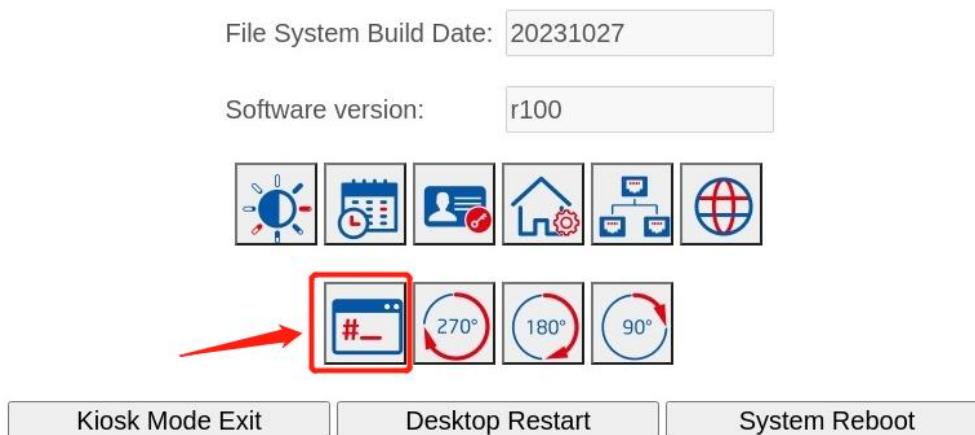
```
vm login: root
Password:
Last login: Fri Oct 27 03:18:07 UTC 2023 from 192.168.20.110 on pts/0
Software version:r100
root@vm:~#
root@vm:~# uname -a
Linux vm 5.15.71+g3313732e9984 #1 SMP PREEMPT Tue Nov 15 10:35:06 UTC 2022 aarch64 aarch64 aarch64 GNU/Linux
root@vm:~#
root@vm:~# cat /etc/os-release
ID=fsl-imx-xwayland
NAME="NXP i.MX Release Distro"
VERSION="5.15-kirkstone (kirkstone)"
VERSION_ID=5.15-kirkstone
PRETTY_NAME="NXP i.MX Release Distro 5.15-kirkstone (kirkstone)"
DISTRO_CODENAME="kirkstone"
root@vm:~#
root@vm:~# free
              total        used        free      shared  buff/cache   available
Mem:        3687572      552232     2624912       62744      510428     2969576
Swap:             0           0           0
root@vm:~#
root@vm:~# exit
```

8. Screen Rotation

File System Build Date: 20231027

Software version: r100

| Kiosk Mode Exit | Desktop Restart | System Reboot |

➤ **Screen rotation for 90°/180°/270°.**

9. Gesture Key for Exit Kiosk Mode

➢ **While under Kiosk mode, touch the left down corner for 5 times to exit it.**

10. System Information
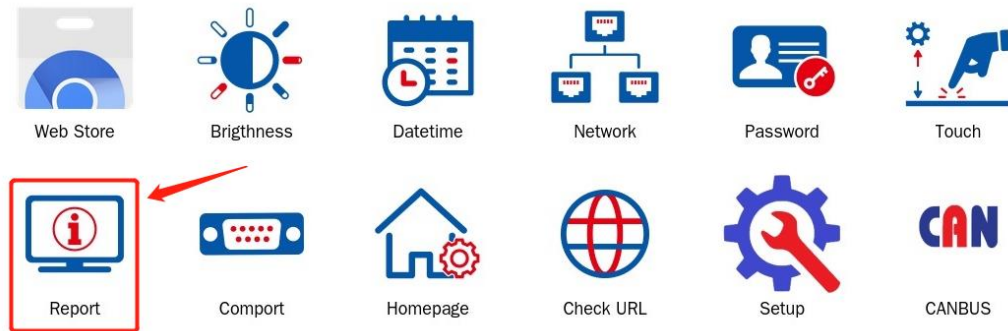
System information

Chromium version :	Chromium 101.0.4951.54 stable

Firmware version :	Linux 5.15.71+g3313732e9984
CPU type :	vm aarch64
System memory :	3687572
Storage size :	14.6G
Touch capability :	eGalax Inc. eGalaxTouch P81X46 0305 v00_M00 k4.16.190eGalax
Monitor resolution :	mode 1280x800
System build date :	20231027
Software version :	r100

User name : root   Password : ••••••••

FTP Server : 192.168.20.185   [Send to FTP]

[Home]   [Setup]

11. Return to Homepage

➢ **Return to the homepage of user settings.**

12. Return to System Login & Setup

File System Build Date: 20231027

Software version: r100

| Kiosk Mode Exit | Desktop Restart | System Reboot |
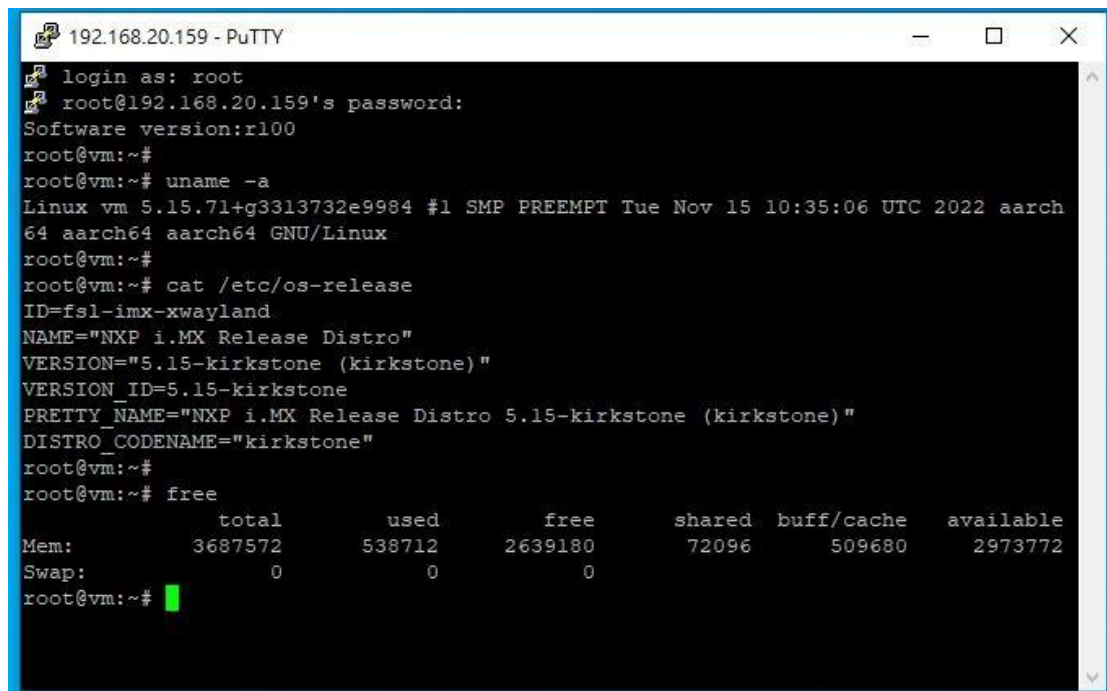
13. SSH Login

> **System also supports remote SSH login.**

14. CAN Bus/COM Port/Touch Screen Test Tool
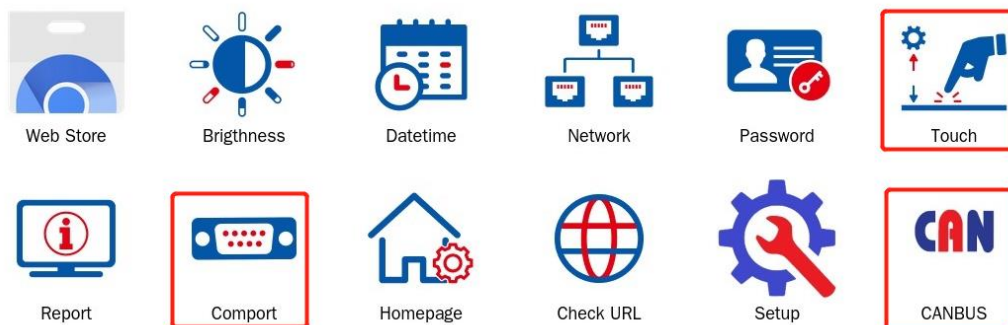
Z

> **COM port tool**

COM Port util

/dev/ttymxc0 ▾   115200 ▾

Close | 0123456789 | Autosend start | Clear log

[log text area]

Home | Setup

➢ **CANBus tool**

CAN0 bus utils

Open | 1m ▾ | Clear log

01234567 | Send | ☐ Auto send

[text area with I cursor]

CAN1 bus utils

Open | 1m ▾ | Clear log

abcdefgh | Send | ☐ Auto send

[text area]

Home | Setup

➢ **Touch screen draw test tool**

Touch tool :

| Clear draw |

| Home | Setup |