



Document Version: I

1



10.1" Smart Terminal

ST-1120W

User's Manual

Version 0.1

Record of Revision

Date	Specs Ver.	Description	Note
2019/10/3	V0.1	Initial	Jay

Safety and Warranty

1. Read these safety instructions carefully.
2. Disconnect from power outlet before cleaning, disassembly or transport. Do not use liquid or spray detergents for cleaning. Use a damp cloth only and avoid any prolonged contact with moisture.
3. Keep the unit away from humidity.
4. Place the unit on a sturdy surface before servicing or operation to prevent accidental drops.
5. The openings on the enclosure are for ventilation. Do NOT cover the openings.
6. Make sure the voltage and load ratings of the power source are correct before connecting the equipment to the power outlet.
7. Position the power cord to prevent accidental tripping. Do not twist, pinch or clip the power cord.
8. All cautions and warnings printed on the equipment should be followed.
9. If the equipment is not used for a long time, disconnect it from the power source.
10. Never pour any liquid into openings. This could cause fire or electrical shock.
11. For safety reasons, only qualified service personnel should open and service the equipment.
12. If any of the following situations arises, get the equipment checked by service personnel:
 - The power cord, plug, or adapter is visibly damaged.
 - Liquid has entered into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
13. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F).

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Chapter 1

Introduction

Main Features

1. 10.1" pos compact and simplified design can solving space saving, also deliver into all kinds of applications
2. A complete FEC android framework and peripheral driver support
3. Sufficient io connectivity can fulfill with pos application
4. Various and flexibility for android os framework customization
5. Flexible placement with 58/80 mm thermal printer



10.1" Smart Terminal (ST-1120W)

10.1" Touch Display



Power Button
Power LED



Free Space



2W Speaker



IO Rear



Optional Device (ST-1120W)

Wifi 802.11 a/b/g/n/ac
Bluetooth 4.2

OR

LTE 4G

2M Camera

MIC In (Project)

LED Logo

LCM (XP2025)

OR

2M Camera (Barcode
Scanner)

Optional Device (ST-1120W)



TP-100
80mm Printer



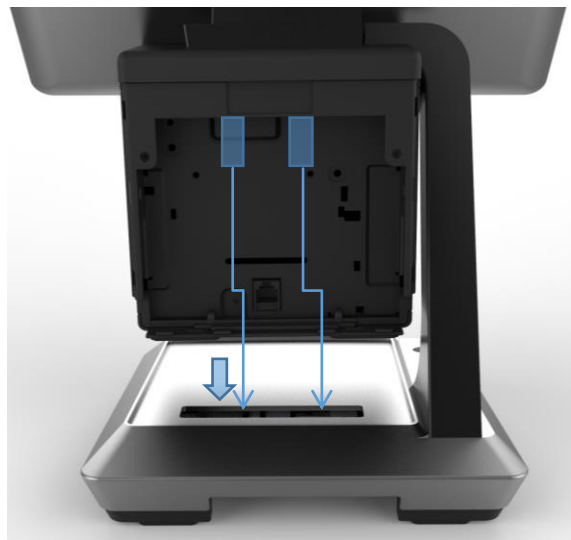
USB Type A to Type B x1



DC 24V Output x1



130W Adapter x1

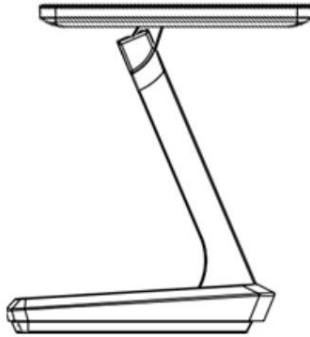


Adjustable angle (ST-1120W)

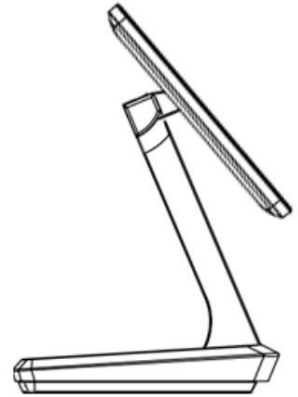
W/O Printer



37°

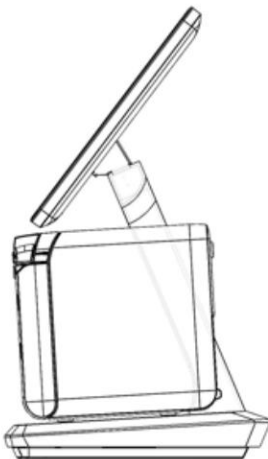


90°

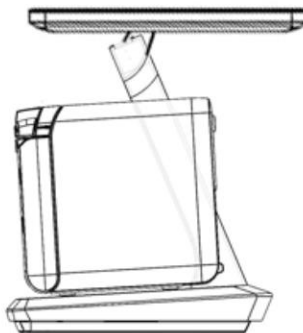


130°

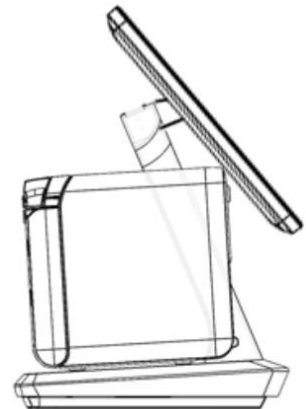
W/ Printer



37°

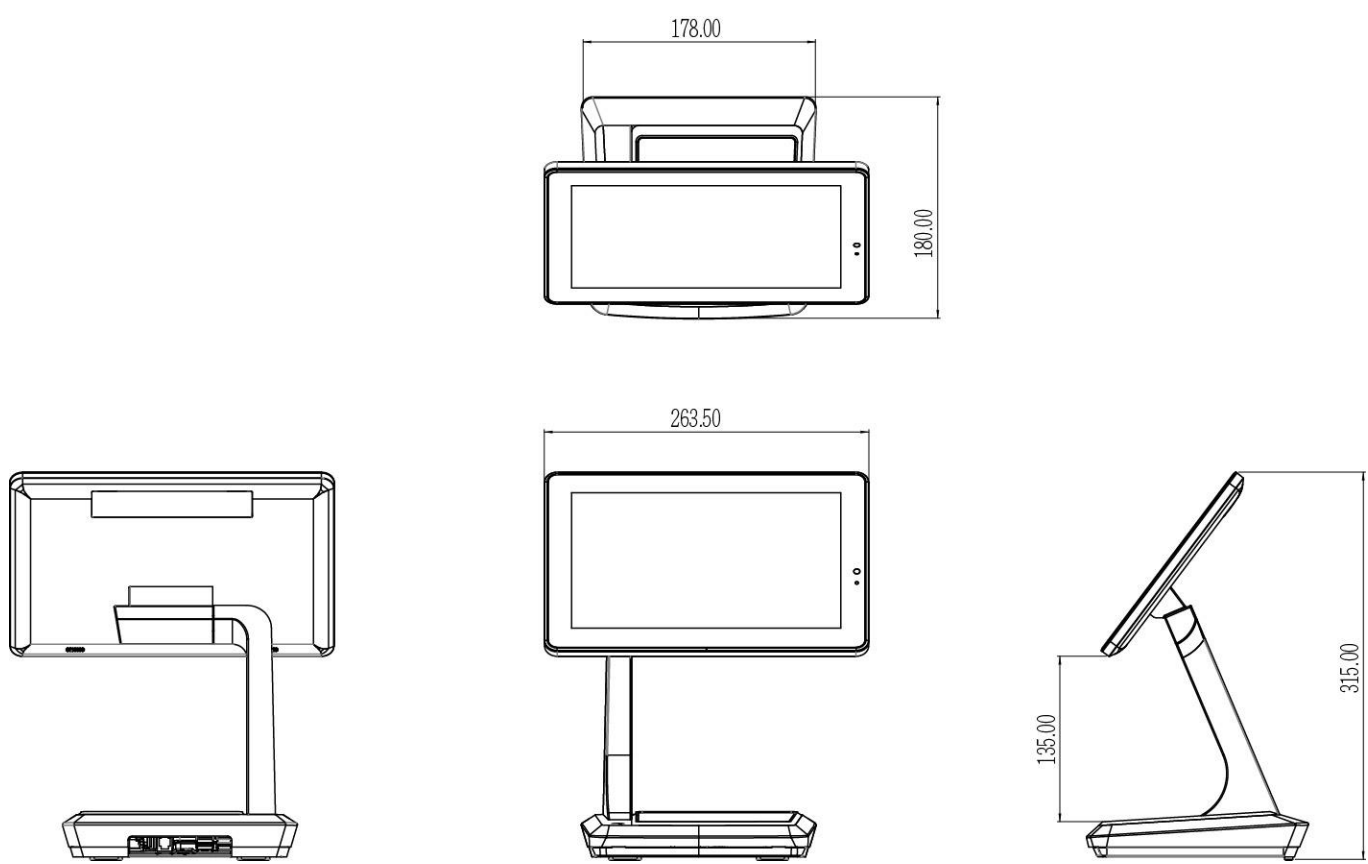


90°



130

Dimension (ST-1120W)



Rear I/O Panel Connectivity (ST-1120W)

IO Default



24V Output 20V Giga Video RJ-11 MicroSD USB USB COM1 COM2
Optional DC in LAN Port C/D

Recovery USB USB (OTG)

Button

I/O Port	Connector Type	Description
20V DC In	DC in connector	Connect the 20V power adaptor to this port
Giga LAN	RJ-45	Connect to Ethernet
Video Port	Video Port	Connect to video port monitor devices
Cash Drawer	RJ-11	Connect to 12V/24V Cash Drawer
Micro SD	Micro SD slot	Connect to Micro SD Card
USB x 3	A type USB 2.0	Connect to standard A type USB devices
USB (OTG) x 1	A type USB 3.0	Connect to standard A type USB devices
COM 1	RJ-45	Serial port COM 1 RI—NA LED ; 5V—Green Light ; 12V – Orange Light
COM 2	RJ-45	Serial port COM 2 RI—NA LED ; 5V—Green Light ; 12V – Orange Light
24V DC Output	DIN 3Pin connector	Connect the 24V power to thermal printer

Packing List (ST-1120W)

Standard		Optional & Peripherals	
1	10.1" Smart Terminal	1	USB Type A to Type B Cable
2	20V 90W Power Adaptor	2	TP-100 Printer
3	AC Cord Cable	3	24V Output Cable
4	RJ-45 to D-sub9 Convert Cable x2	4	20V 130W Power Adaptor

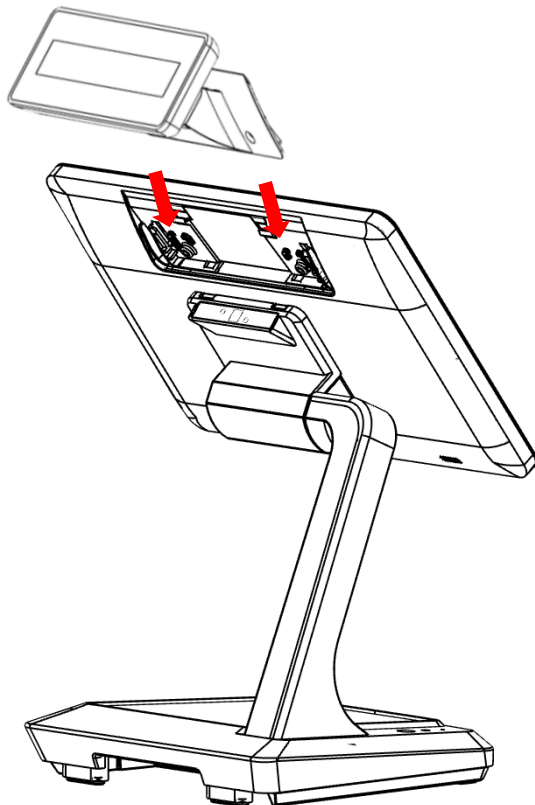
Chapter 2

Hardware Installation & Setting

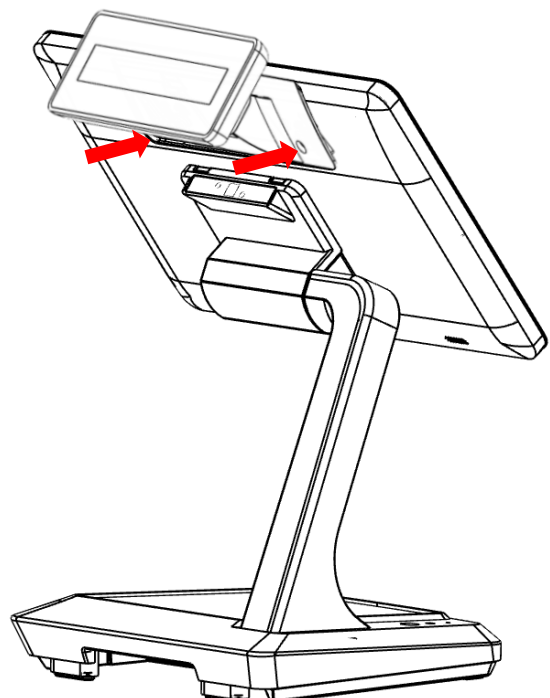
Optional Device Installation

1. Customer Display Installation (XP-2025)

Install XP-2025 Pull up the connector

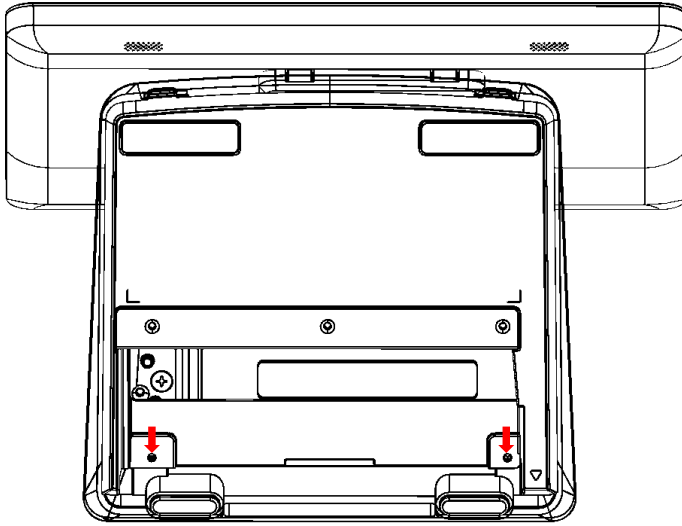


Fasten 2 screws for customer display

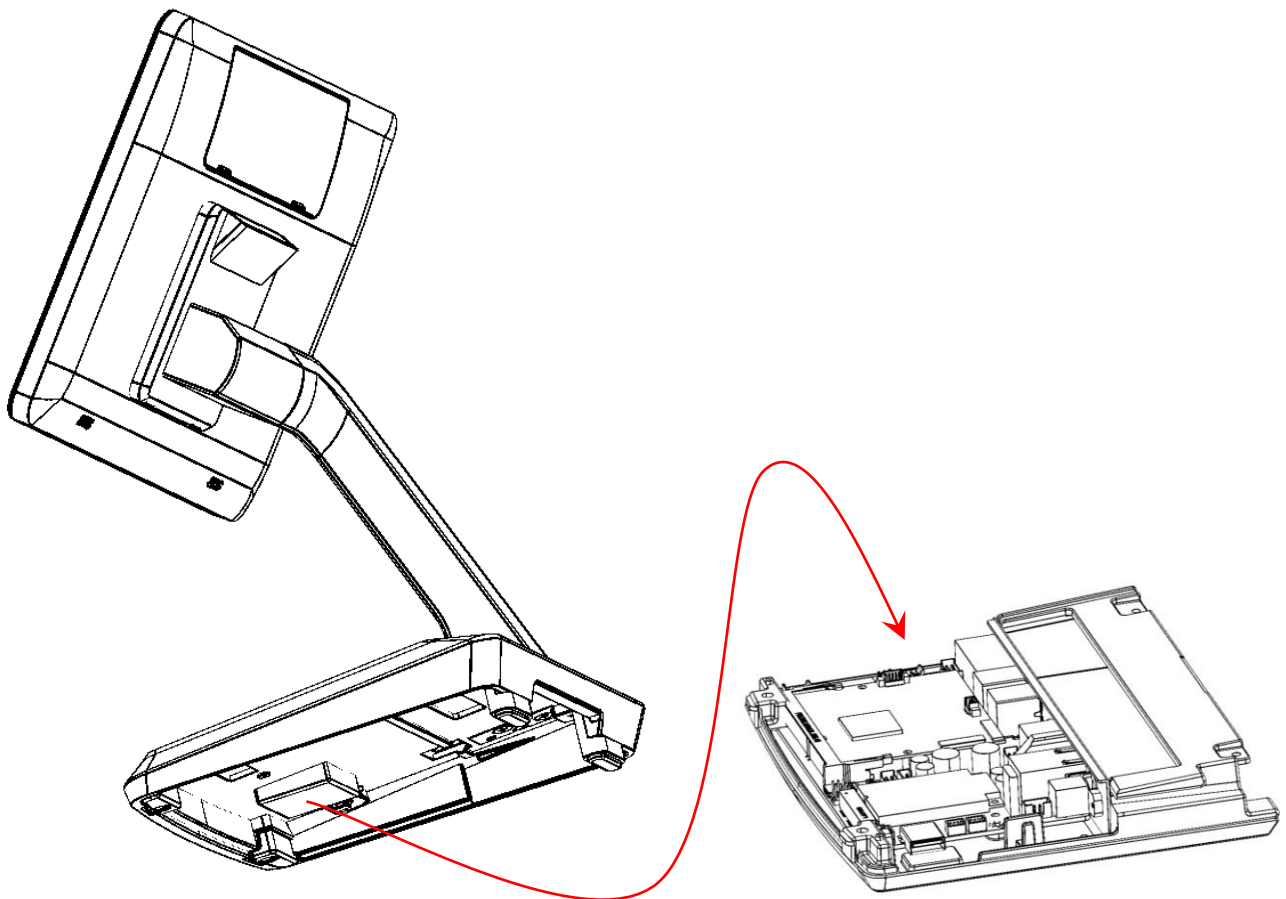


2. LTE 4G SIM Card Installation

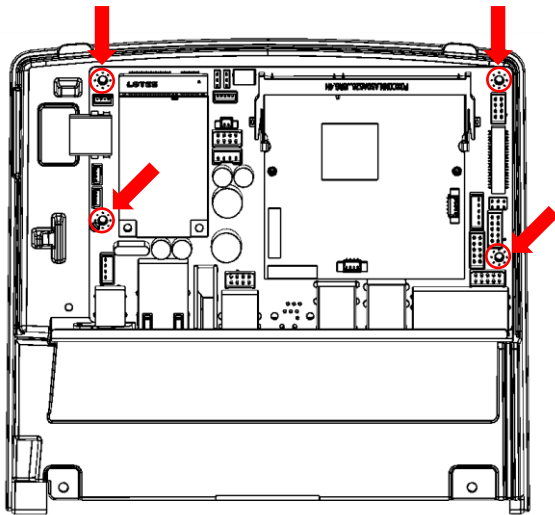
Remove 2 Screws



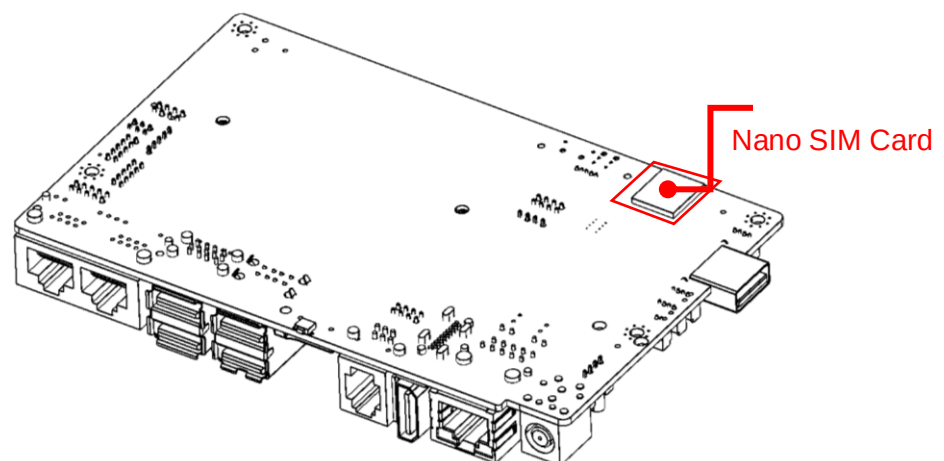
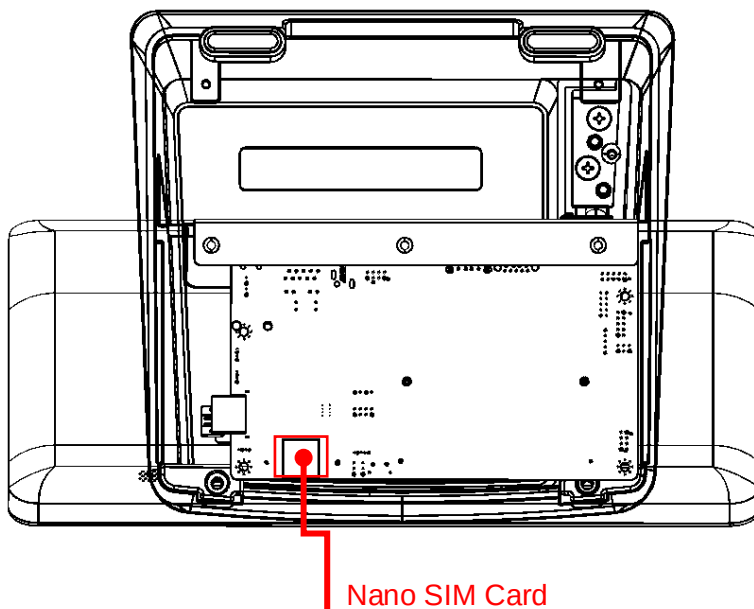
Remove IO Box



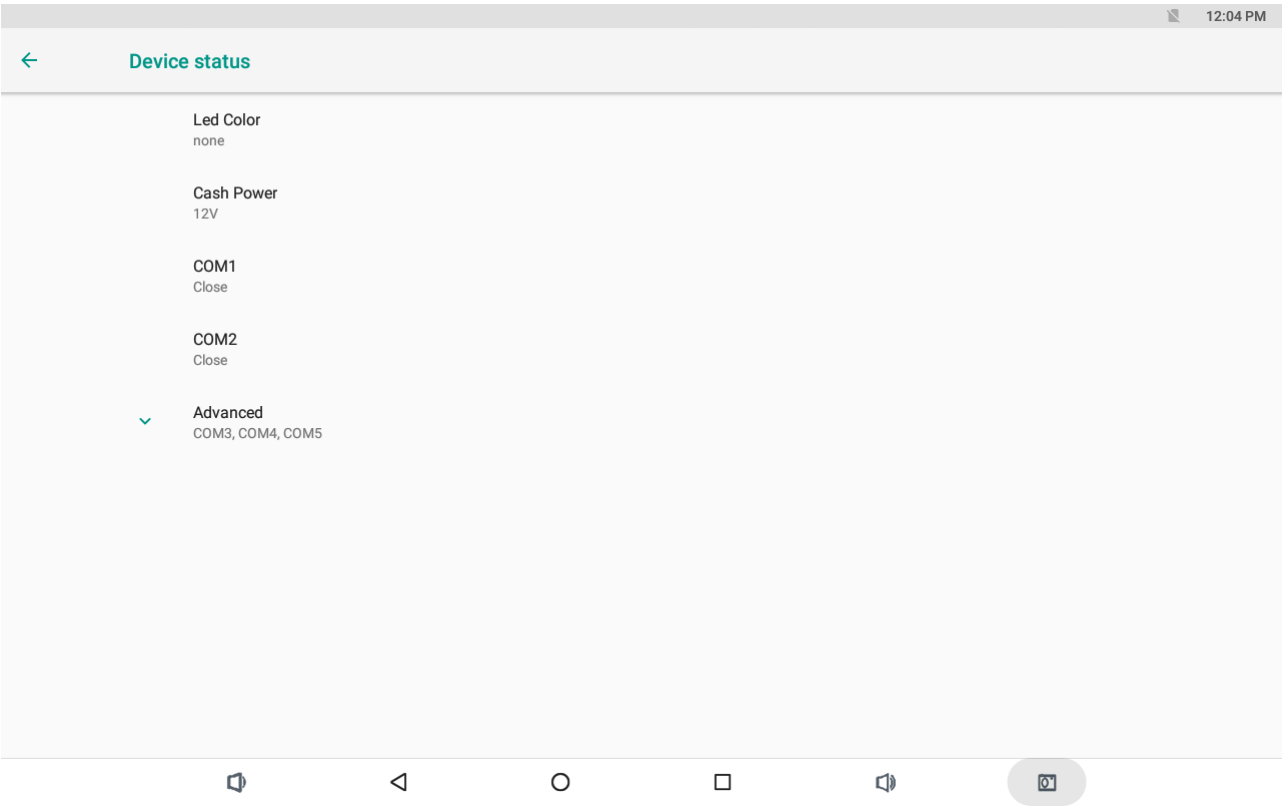
Remove 4 Screws



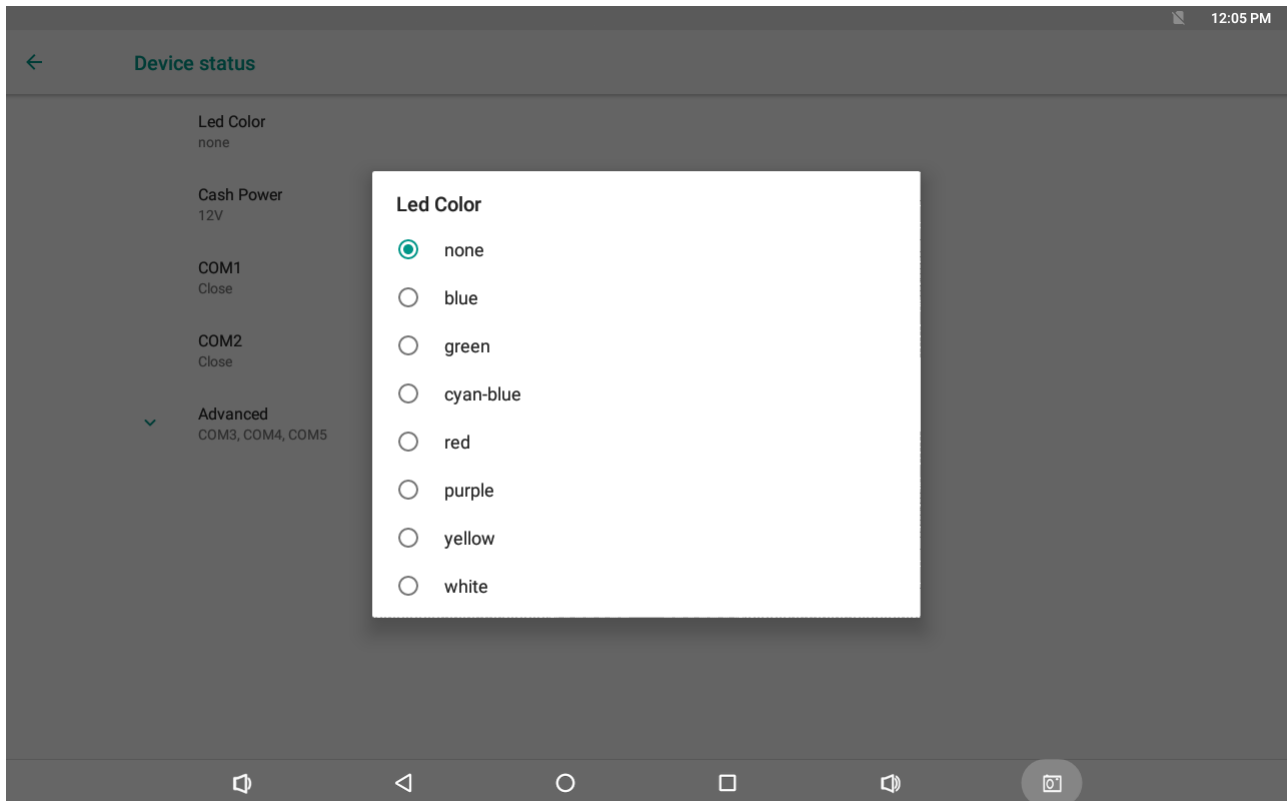
Insert SIM card in slot



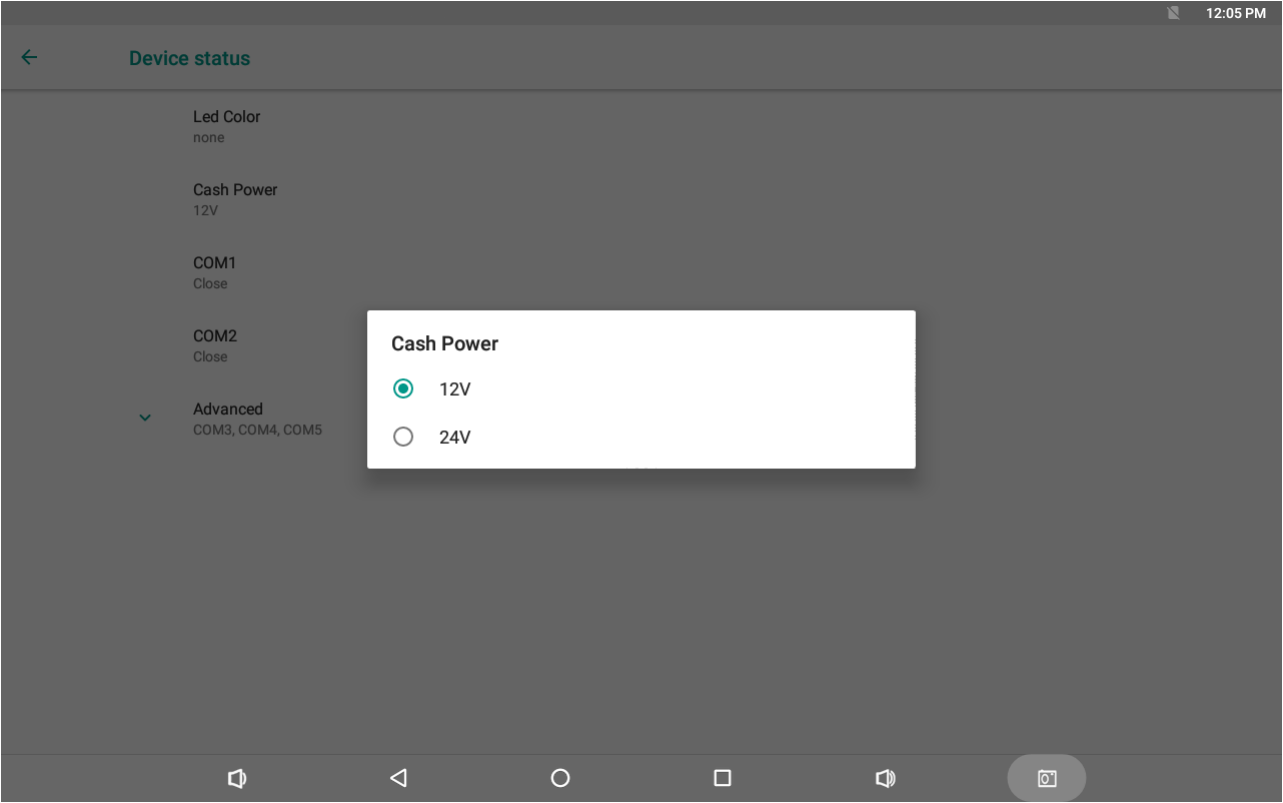
Device status setting



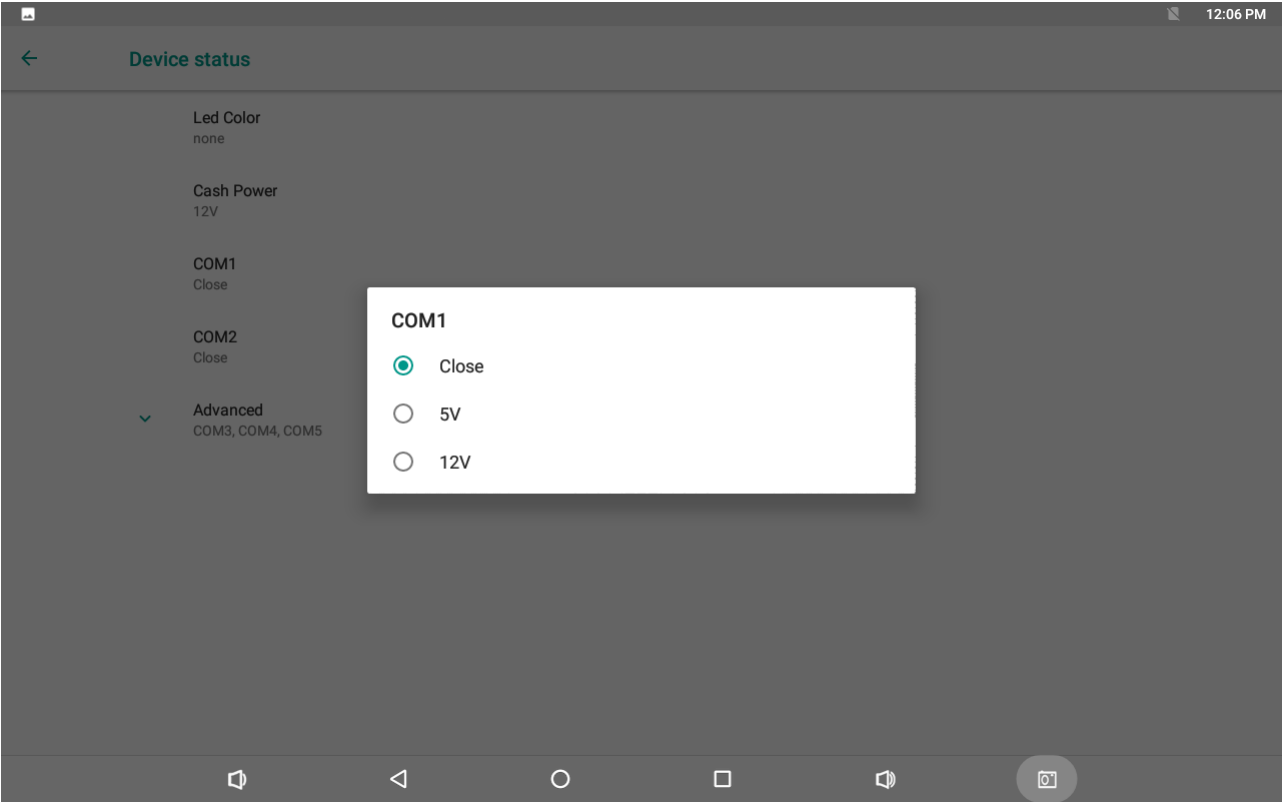
1. Led Color Setting (none / blue / green / cyan-blue / red / purple / yellow / white)



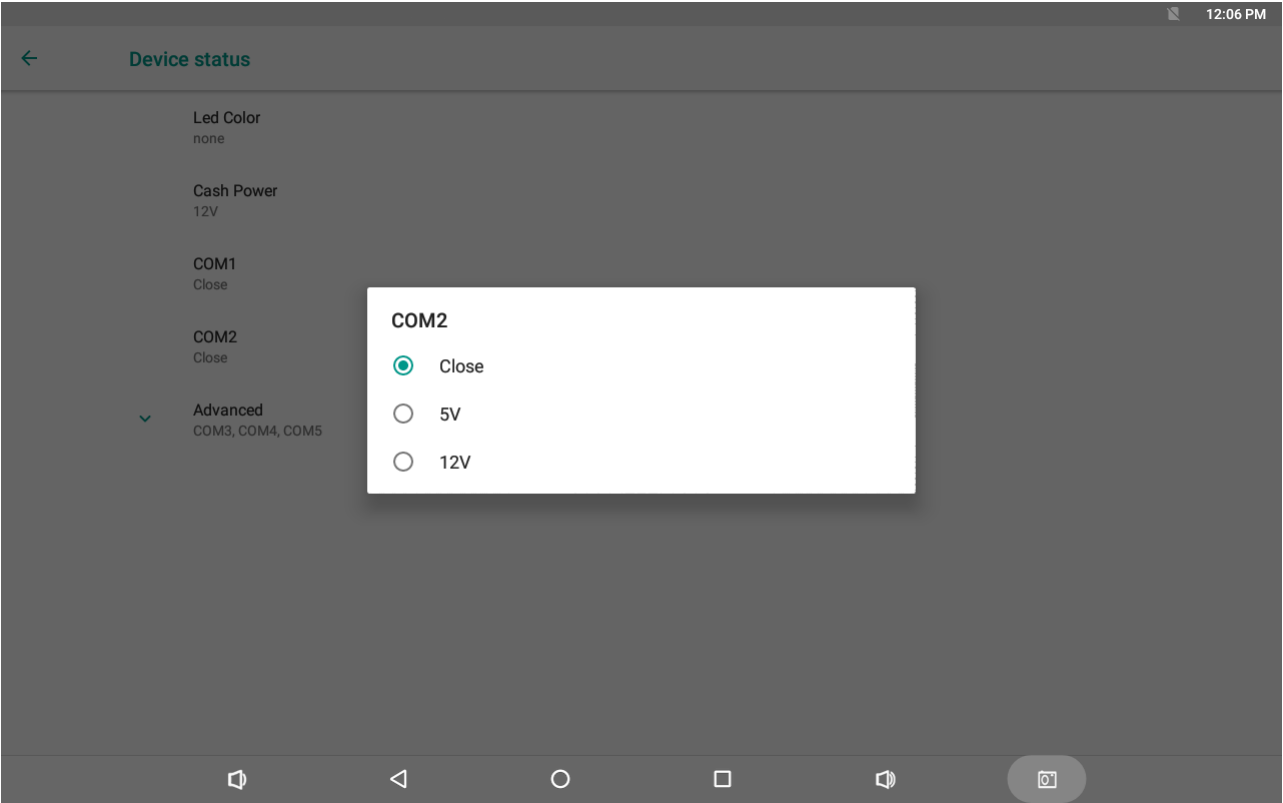
2. Cash Drawer Power Setting (12V / 24V)



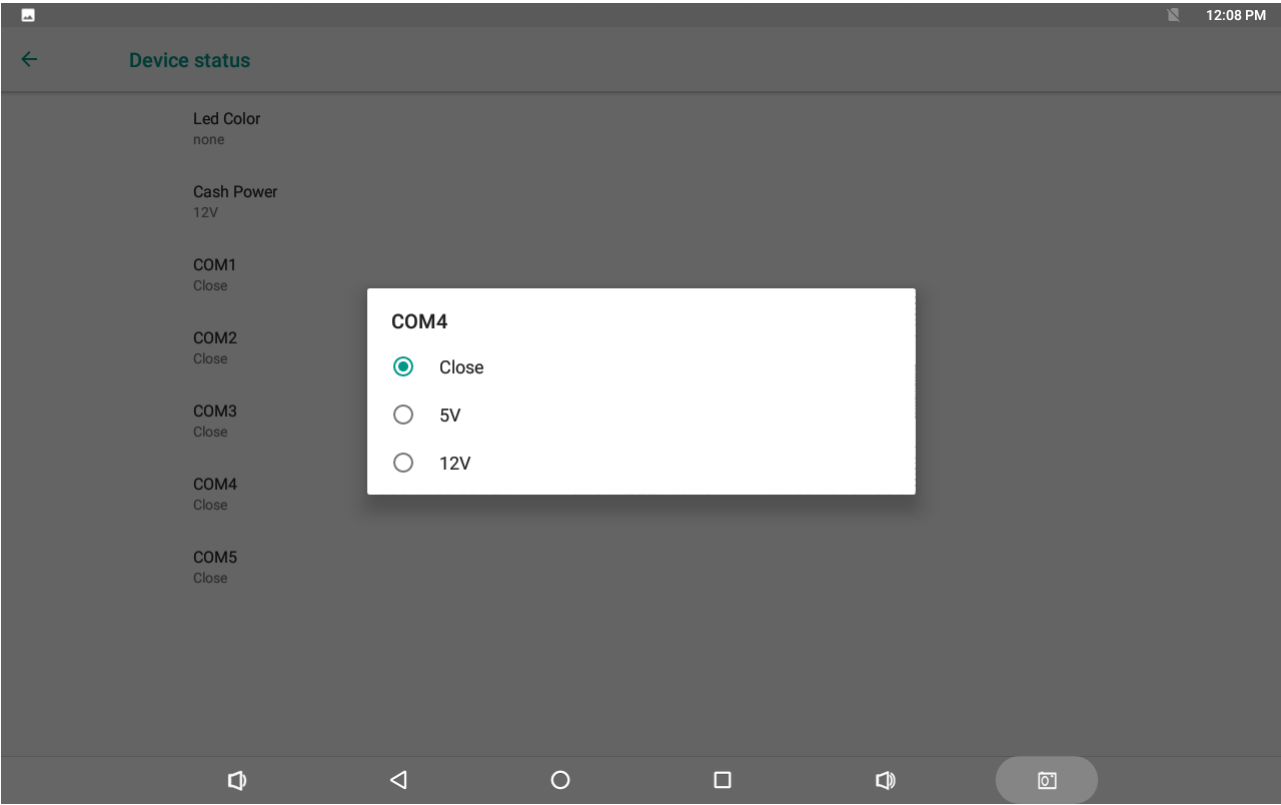
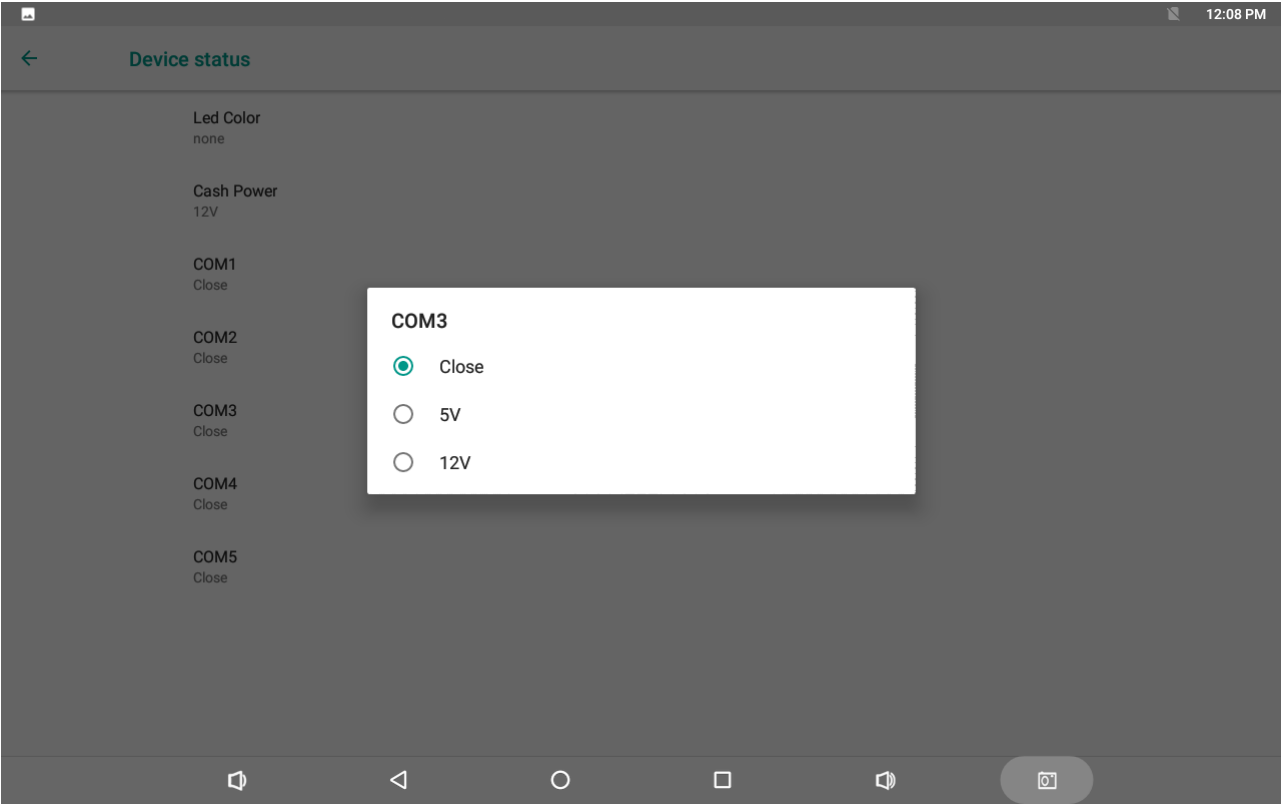
3. COM 1 Power Setting (Close / 5V / 12V)



4. COM 2 Power Setting (Close / 5V / 12V)

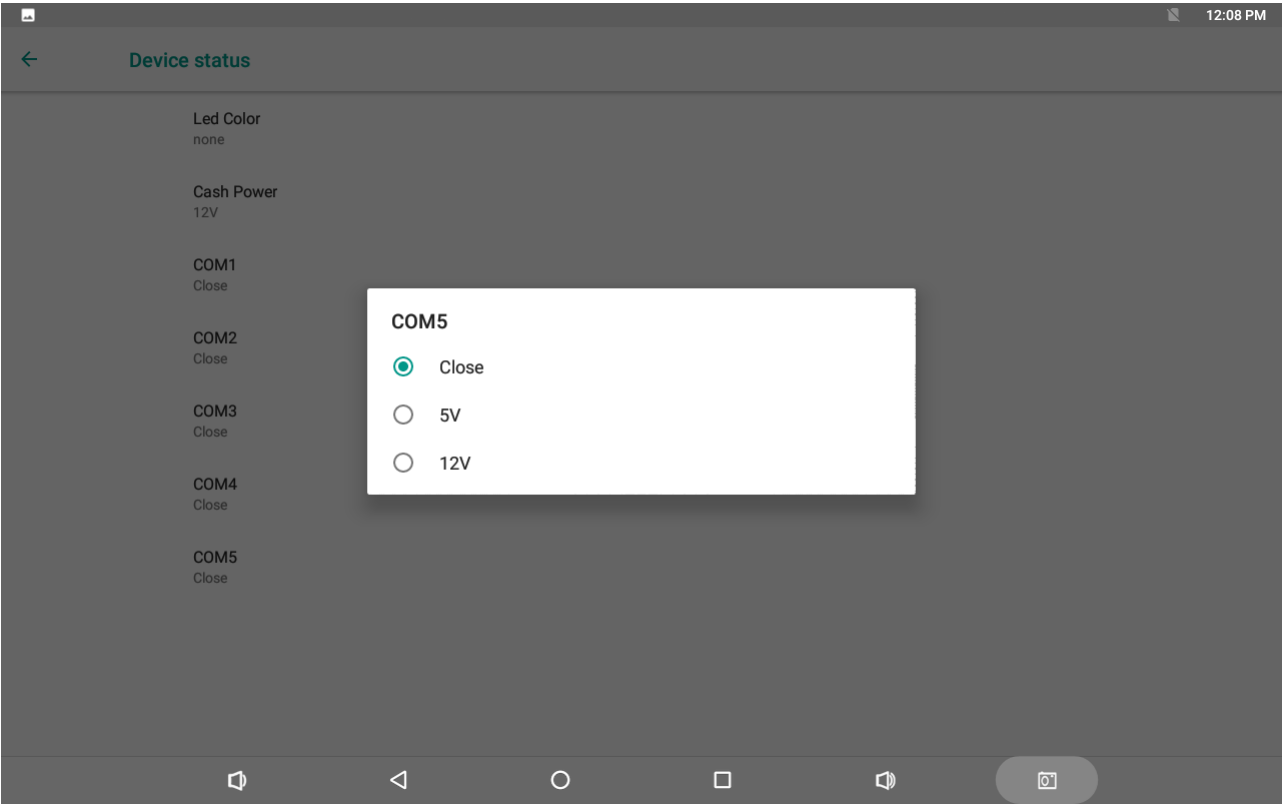


5. COM 3 、 4 Power Setting (Close / 5V / 12V)
For PP-1125



6. COM 5 Power Setting (Close / 5V / 12V)

For LCM & VFD



Chapter 3

Software Setting

Device Sample Code (ST-1120W)

1. Cash Drawer

```
public void CashDrawer_1_Open_click(View view) {
    try {
        Intent intent = new Intent("android.intent.action.SET_BOX_OUTPUT1_HIGH");
        mContext.sendBroadcast(intent);
        Thread.sleep(200);
        Intent intent1 = new Intent("android.intent.action.SET_BOX_OUTPUT1_LOW");
        mContext.sendBroadcast(intent1);
    } catch (Exception e) {
        Log.d(TAG, "Failed to send broadcast.");
    }
}

public void CashDrawer_2_Open_click(View view) {
    try {
        Intent intent = new Intent("android.intent.action.SET_BOX_OUTPUT2_HIGH");
        mContext.sendBroadcast(intent);
        Thread.sleep(200);
        Intent intent1 = new Intent("android.intent.action.SET_BOX_OUTPUT2_LOW");
        mContext.sendBroadcast(intent1);
    } catch (Exception e) {
        Log.d(TAG, "Failed to send broadcast.");
    }
}
```

2. COM Port

COM1 = /dev/ttyUSB0

COM2 = /dev/ttyUSB1

COM3 = /dev/ttyUSB2

COM4 = /dev/ttyUSB3

COM5 (LCM/VFD) = /dev/ttyS1

```
int intSerialPortHandle = -1;
int intReturnCode = -1;
private int intBaudRate=9600;
private String strTestString="testStringtestString";
String strttyUSBPath;

SerialPort sp;

private void SleepMiniSecond(SerialPort spThread, int minSecond)
{
    try {
        spThread.sleep(minSecond);
        dump_trace("SLEEP_MSEC="+ minSecond);
    } catch (InterruptedException e) {
        e.printStackTrace();
    }
}

private boolean RS232_Test
{
    int intDataReceivedLength=0;
    sp = new SerialPort();

    strttyUSBPath = "/dev/ttyUSB0"
    intSerialPortHandle = sp.open(strttyUSBPath,intBaudRate);

    byte[] btyVersion_msg_received = new byte[256];
    Arrays.fill( btyVersion_msg_received, (byte) 0 );
```

```

intReturnCode = sp.write(intSerialPortHandle,strTestString.getBytes());

sp.setListener(splistener);
intDataReceivedLength = sp.getDataReceivedLength();
int nRetry=0;
while (intDataReceivedLength == 0)
{
    SleepMiniSecond(sp, 1000);
    intDataReceivedLength = sp.getDataReceivedLength();
    nRetry++;
    if (nRetry == 2)
        break;
}

if ( intDataReceivedLength>= 0) {
    btyVersion_msg_received =
Arrays.copyOf(sp.getBytDataReceived(),intDataReceivedLength);
}

sp.close(intSerialPortHandle);
sp = null;
boolean testResult = false;
testResult = (intDataReceivedLength > 0 )? true: false;
return testResult;
}

```

Chapter 4

Specifications



10.1" Smart Terminal

Model	ST-1120W
CPU	RK-3288 Quad Core Cortex A17-1.6Ghz
Resolution	1280x800 IPS 350nits MTBF 25K
Touch	Projected Capacitive (Multi-touch)
DRAM	2GB
eMMC	16GB
Default I/O	1x DC 20V Input 1x Gigabit LAN 1x Video Port 1x Cash Drawer (12V/24V) 1x Micro SD Card 1x Recovery button 3x USB 2.0 1x USB 3.0 (OTG) 2x COM Port (RI/5V/12V) 1x DC 24V Out (Option)
Optional Device	TP-100 Thermal printer Wifi/BT or LTE 4G (Mini PCIe) 2M Camera (Front or Rear) LCM (XP-2025) LED Logo
Speakers	2 x 2W
OS	Android 8.1 / Ubuntu 16.04
Power	20V 90W / 130W

Chapter 5

Troubleshooting