

## USM-110

**Mini Digital Signage Player with  
Arm® Cortex®-A17 Quad-Core  
Processor**

**ADVANTECH**

*Enabling an Intelligent Planet*

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## Product Warranty (2 years)

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3. If your product is diagnosed as defective, obtain a return merchandise authorization (RMA) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a completed Repair and Replacement Order Card, and a proof of purchase date (such as a photocopy of your sales receipt) into a shippable container. Products returned without a proof of purchase date are not eligible for warranty service.
5. Write the RMA number clearly on the outside of the package and ship the package prepaid to your dealer.

# Declaration of Conformity

## FCC Class B

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 instruction manual, 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 receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

## Technical Support and Assistance

1. Visit the Advantech website at [www.advantech.com/support](http://www.advantech.com/support) to obtain the latest product information.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before calling:
  - Product name and serial number
  - Description of your peripheral attachments
  - Description of your software (operating system, version, application software, etc.)
  - A complete description of the problem
  - The exact wording of any error messages

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## Warnings, Cautions, and Notes

**Warning!** *Warnings indicate conditions that, if not observed, can cause personal injury!*



**Caution!** *Cautions are included to help prevent hardware damage and data losses. For example,*



*“Batteries are at risk of exploding if incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type as recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.”*

**Note!** *Notes provide additional optional information.*



## Document Feedback

To assist us with improving this manual, we welcome all comments and constructive criticism. Please send all feedback in writing to [support@advantech.com](mailto:support@advantech.com).



# Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect the equipment from all power outlets before cleaning. Use only a damp cloth for cleaning. Do not use liquid or spray detergents.
4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
5. Protect the equipment from humidity.
6. Place the equipment on a reliable surface during installation. Dropping or letting the equipment fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. Do not cover the openings.
8. Ensure that the voltage of the power source is correct before connecting the equipment to a power outlet.
9. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage from transient overvoltage.
12. Never pour liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If any of the following occurs, have the equipment checked by service personnel:
  - The power cord or plug is damaged.
  - Liquid has penetrated the equipment.
  - The equipment has been exposed to moisture.
  - The equipment is malfunctioning, or does not operate according to the user manual.
  - The equipment has been dropped and damaged.
  - The equipment shows obvious signs of breakage.
15. Do not leave the equipment in an environment with a storage temperature of below -20 °C (-4 °F) or above 60 °C (140 °F) as this may damage the components. The equipment should be kept in a controlled environment.
16. CAUTION: Batteries are at risk of exploding if incorrectly replaced. Replace only with the same or equivalent type as recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
17. In accordance with IEC 704-1:1982 specifications, the sound pressure level at the operator's position does not exceed 70 dB (A).

DISCLAIMER: These instructions are provided according to IEC 704-1 standards. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

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## Safety Precautions - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from the PC chassis before manual handling. Do not touch any components on the CPU card or other cards while the PC is powered on.
- Disconnect the power before making any configuration changes. A sudden rush of power after connecting a jumper or installing a card may damage sensitive electronic components.

### **Warning!**



1. *Input voltage rated: 9 ~ 32 V<sub>DC</sub>*
2. *Transport: carry the unit with both hands and handle with care*
3. *Maintenance: clean the surfaces using only approved products or a dry applicator*

### **European Contact Information**

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# Chapter 1

## Overview

## 1.1 Introduction


USM-110 is an ultra-compact digital signage player that delivers high-performance graphics and supports H.265-encoded native 4K content at 60fps as well as dual FHD video output. The system's ultra-compact, fanless design and support for diverse mount options ensures easy installation in a wide range of environments. Moreover, USM-110 is integrated with Advantech's WISE-PaaS/SignageCMS digital signage management software, which allows users to layout, schedule, and dispatch signage content to USM-110 over the Internet. This enables remote delivery of diverse high-resolution multimedia to multiple client devices simultaneously.

## 1.2 Specifications

### 1.2.1 General Specifications

		USM-110	USM-110 Delight
System	CPU	ARM® Cortex®-A17 RK3288 quad-core processor (1.6 GHz)	
Graphics	GPU	Mali-T764	
	Graphics Engine	OpenGL ES 1.1/1.2/3.0, OpenCL 1.1, DirectX 11	
Memory	Capacity	2 GB onboard DDR3L (1333 MHz)	
Storage	Flash	16 GB of onboard eMMC	8 GB of onboard eMMC
	Extension	Micro SD (up to 32 GB)	
Multimedia	Display Resolution	HDMI 1: Up to 4K (3840 x 2160 resolution) (default 1080P: 1920 x 1080)	
		HDMI 2: 1920 x 1080	N/A
I/O	HDMI	2	1
	LAN	1 x 10/100/1000 Mbps	
	Serial Port	1 (RS-232/485/422 via jumper)	N/A
	USB 2.0	4	1
	OTG USB	1	
	Audio	1	
	Reset	1	
	LED Indicators	1 x Power 1 x Wireless Network	
	DC-In	1	
Expansion	Micro SD Card	1	
	M.2 2230	1 (for optional Wi-Fi module)	
	Mini PCIe	1 (for optional 4G module)	N/A
Mechanical	Dimensions (L x W x H)	156 x 112 x 28 mm/6.14 x 4.41 x 1.10 in	
	Weight	0.43 kg/0.94 lb	
Power	Input Rating	12V/3A (36W power adapter); IEEE 802.3at/30W <sup>1</sup>	
	Power Consumption	Typical 15W Max. 25W	
Installation	Mount Options	VESA (75 x 75), wall, desktop, pole, magnet, DIN rail	

Software	Operating System	Android 6.0/8.1/10.0, Linux Debian 9.0 (Linux platform does not support 4K resolution)
	Application Software	WISE-PaaS/SignageCMS
	Display Orientation	Portrait and landscape modes supported
	Client Status Reports	Generates heartbeats and system reports
	Supported Media Formats	Image: JPG, PNG, BMP, GIF Video: H.264, MPEG-4, MPEG-2 Text: text, scrolling text Audio: MP3, AAC, PCM
Environmental	Operating Temperature	0 ~ 40 °C/32 ~ 104 °F
	Storage Temperature	-40 ~ 85 °C/-40 ~ 185 °F
	Relative Humidity	90% @ 40 °C/104 °F (non-condensing)
Certification	EMC/Safety	CCC, BSMI, CE, FCC, UL, CB

- Note!** 
1. Only USM-110A-BR124 and USM-110A-BR125 SKUs support PoE+ function and DC 12 ~ 36V power input. Other SKUs do not support PoE function and use 12Vdc power input only.
  2. When USM-110 is installed as a PoE-powered device supplied by power sourcing equipment (PSE), it must comply with the IEEE 802.3at PoE standard. An IEEE 802.3at-qualified PSE will provide up to 30W power to USM-110. Only 25.5W power input is available for USM-110 because of transmitter dissipation. USM-110 can be connected to an AC power source and PSE simultaneously. In such cases, USM-110 will take AC power as the primary power source and PoE as the redundant power source.

## 1.2.2 Environmental Specifications

- Operating Temperature: 0 ~ 40 °C/32 ~ 104 °F
- Relative Humidity: 10 ~ 90% @ 40 °C/104 °F (non-condensing)
- Shock: 10 G peak acceleration (11 ms duration)
- Vibration: 5 ~ 500 Hz 0.5 Grms, random
- Certification: CCC, CE, UL, FCC, CB, BSMI

# 1.3 Dimensions

Unit:mm

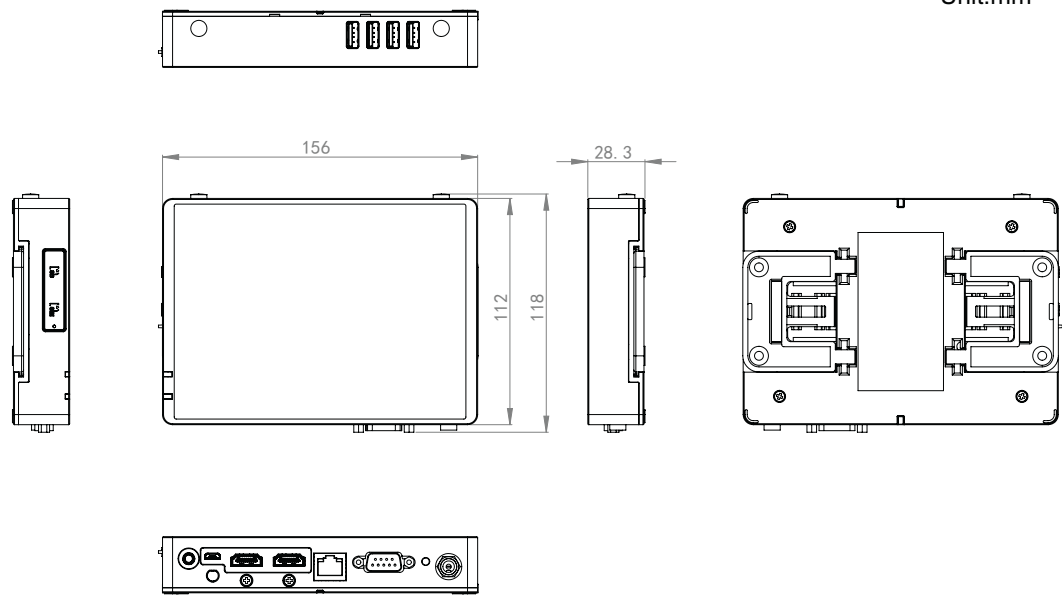


Figure 1.1 USM-110 Standard Model

Unit:mm

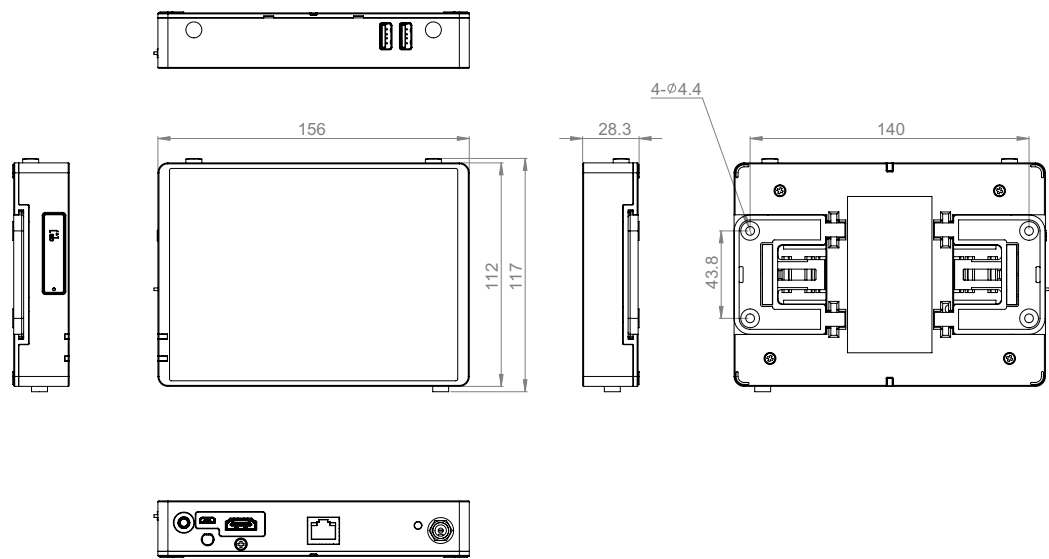


Figure 1.2 USM-110 Delight Model



# Chapter 2

## Installation

## 2.1 Quick Tour

Before setting up the device, take a moment to familiarize yourself with the functions of the controls, drivers, connectors, and ports located on the front panel, as shown below.



Figure 2.1 USM-110 Front View

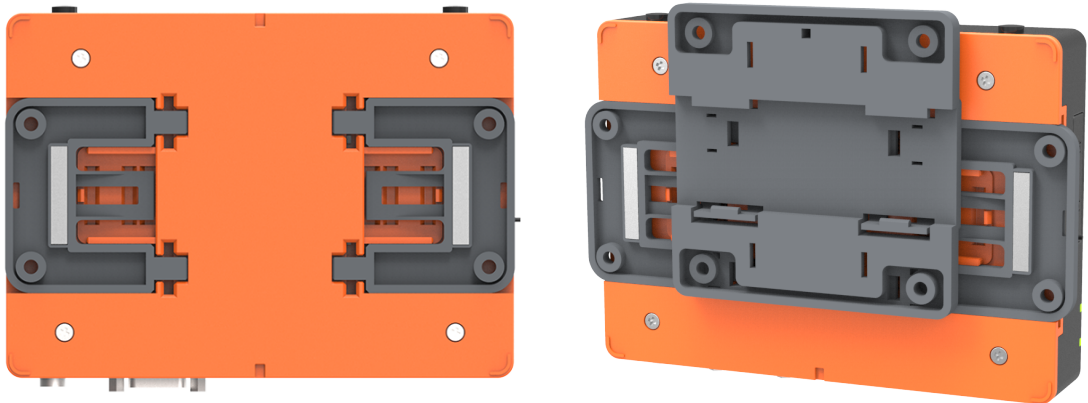


Figure 2.2 USM-110 Rear View

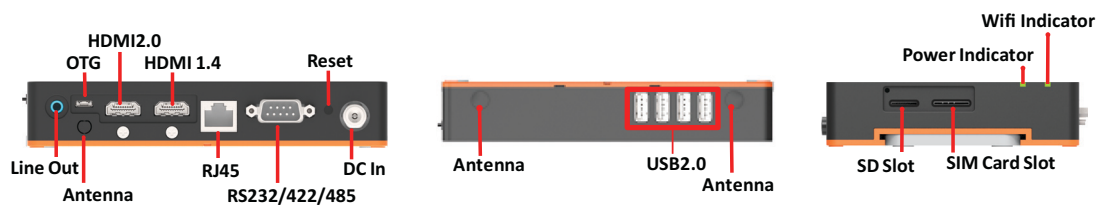


Figure 2.3 USM-110 Standard I/O Layout

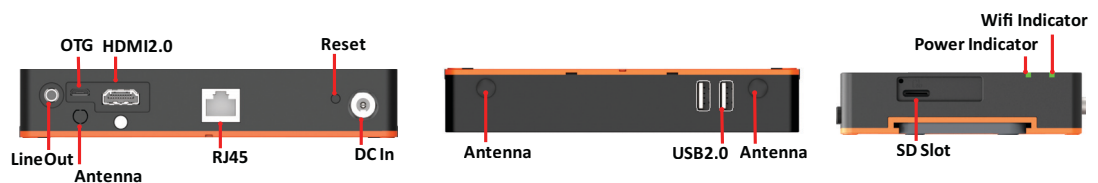


Figure 2.4 USM-110 Delight I/O Layout

## 2.2 Installation Procedures

### 2.2.1 Connecting the Power Cord

USM-110 only supports DC power (12 V<sub>DC</sub>, 3A, 36 W). When plugging/unplugging the power cord, hold the cord at the plug end.

### 2.2.2 Activating the Power Source

Verify that the power cord is connected to the power input port of the device. Then connect the plug end of the power cord to the power source outlet.

## 2.3 Device Mounting

To ensure flexible installation, the USM-110 digital signage player supports five mount options - wall, magnet, VESA, pole, and DI-rail mounting.

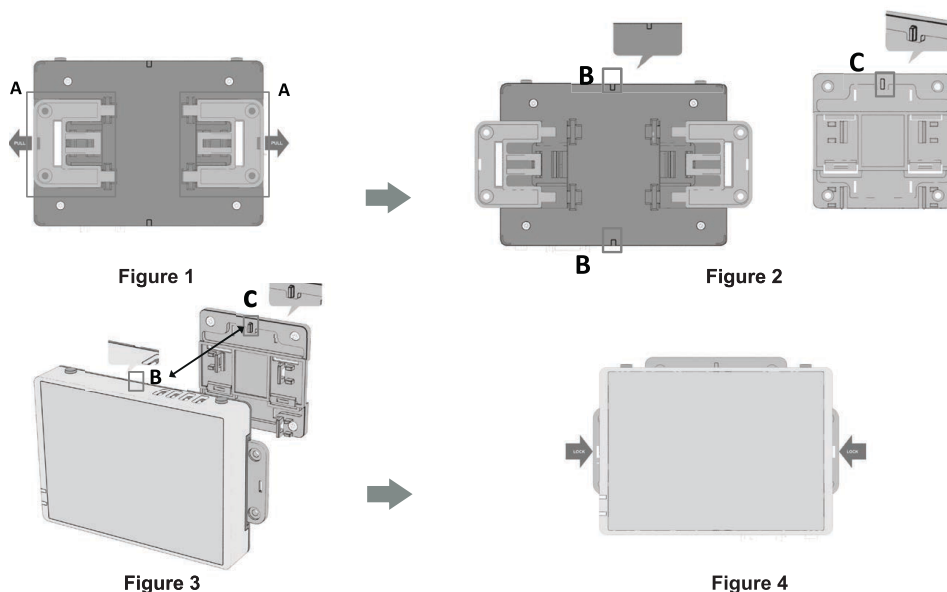
Learn more about USM-110 mount options by watching the video at the links below.

YouTube: [https://youtu.be/c\\_yWG\\_WvkmQ](https://youtu.be/c_yWG_WvkmQ)

Youku: [http://v.youku.com/v\\_show/id\\_X-](http://v.youku.com/v_show/id_X-MzgyMTY4NDE4MA==.html?spm=a2h3j.8428770.3416059.1)

[MzgyMTY4NDE4MA==.html?spm=a2h3j.8428770.3416059.1](http://v.youku.com/v_show/id_X-MzgyMTY4NDE4MA==.html?spm=a2h3j.8428770.3416059.1)

### 2.3.1 Module Assembly (for VESA, Pole, and DIN Rail Mounting)



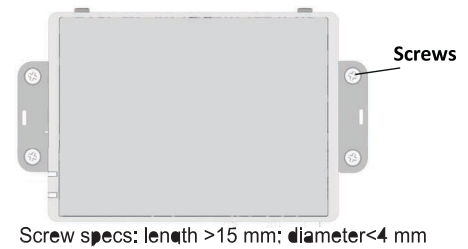
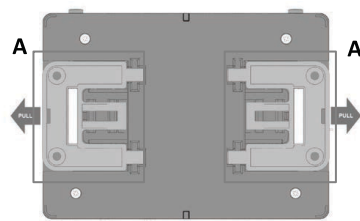
Step 1. Pull out the two side wings (A) located at the rear of the device (Figure 1).

Step 2. Align the anchor of the mount bracket (C) with the mount holes at the rear of the device (B) (Figure 2).

Step 3. Carefully press the bracket until the anchor clicks into place (Figure 3).

Step 4. Return the two side wings (A) to their original position (Figure 4).

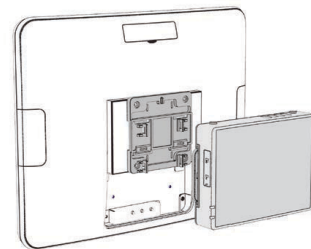
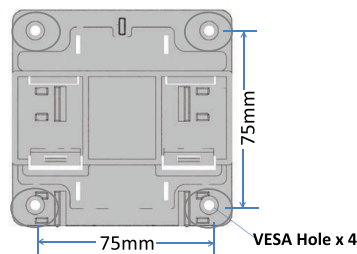
## 2.3.2 Wall Mount Installation



Step 1. Pull out the two side wings (A) at the rear of the device.

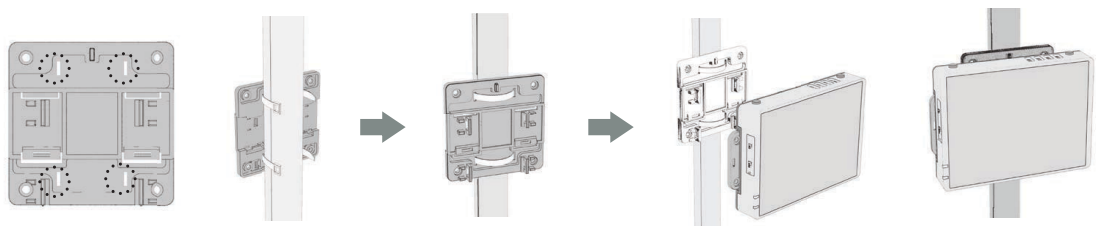
Step 2. Use four screws to affix the device to the wall via the screw holes of the two side wings.

## 2.3.3 VESA Mount Installation



1. Using four screws, attach the mount bracket to the VESA (75x75) mount
2. Attach the device to the mount bracket following the “Module Assembly” steps outlined previously.

## 2.3.4 Pole Mount Installation



Step 1. Affix the mount bracket to the pole using cable ties (see above illustrations).

Step 2. Attach the device to the mount bracket following the “Module Assembly” steps outlined previously.

### 2.3.5 DIN-Rail Mount Installation

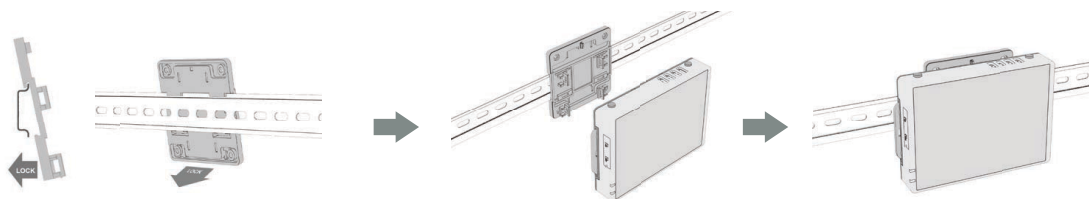


Figure 6

Step 1. Affix the mount bracket to the DIN rail (Figure 6).

Step 2. Attach the device to the mount bracket following the “Module Assembly” steps outlined previously.

### 2.3.6 Magnet Mount Installation

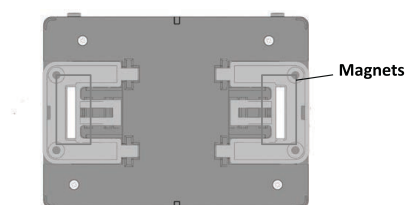


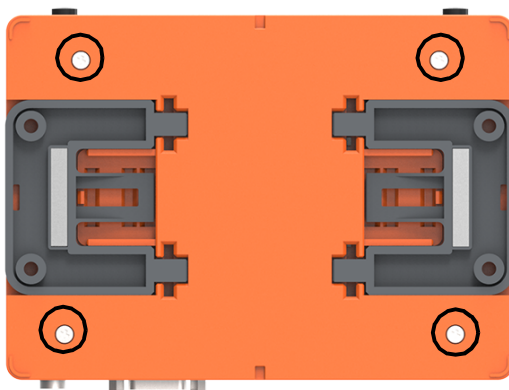
Figure 7

Step 1. Place the device onto a flat metal surface.

Step 2. Use the two magnets on the side wings to affix the device to the metal surface (Figure 7).

## 2.4 Expanded Module Installation

Step 1. Unscrew the affixing screws and remove the orange rear cover.



Step 2. Unscrew the screws circled in red below, and remove the bracket.

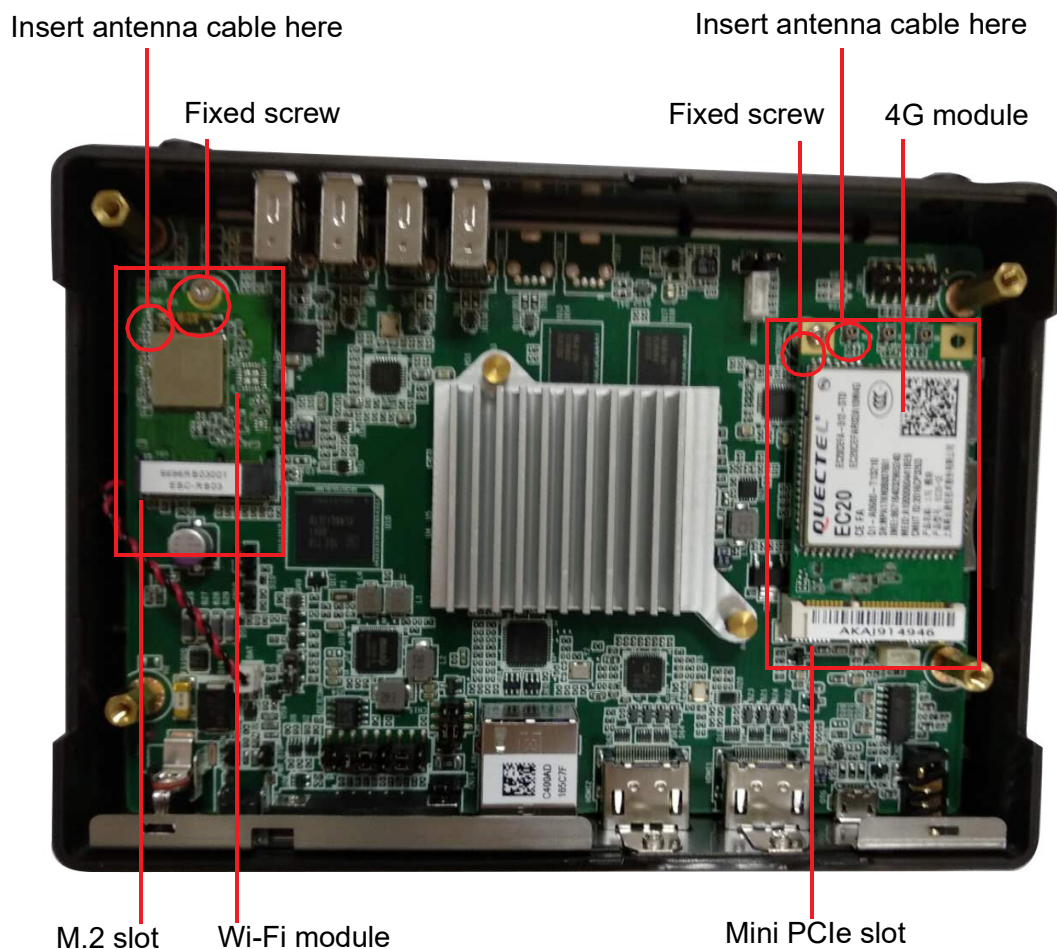


Step 3. Install the Wi-Fi or 4G module into the M.2 or mini PCIe slot, respectively.

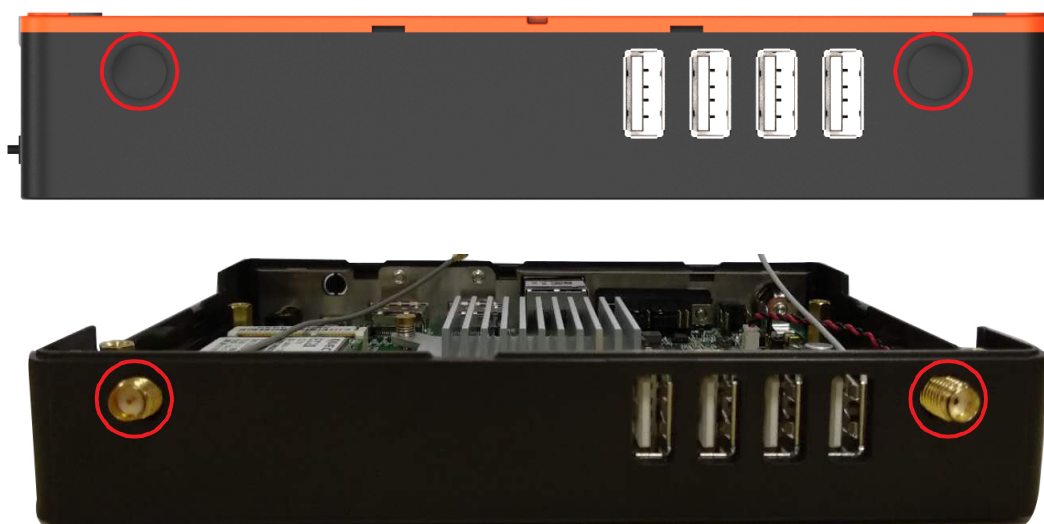




Step 4. Insert an antenna cable into the module (see the image below for reference).



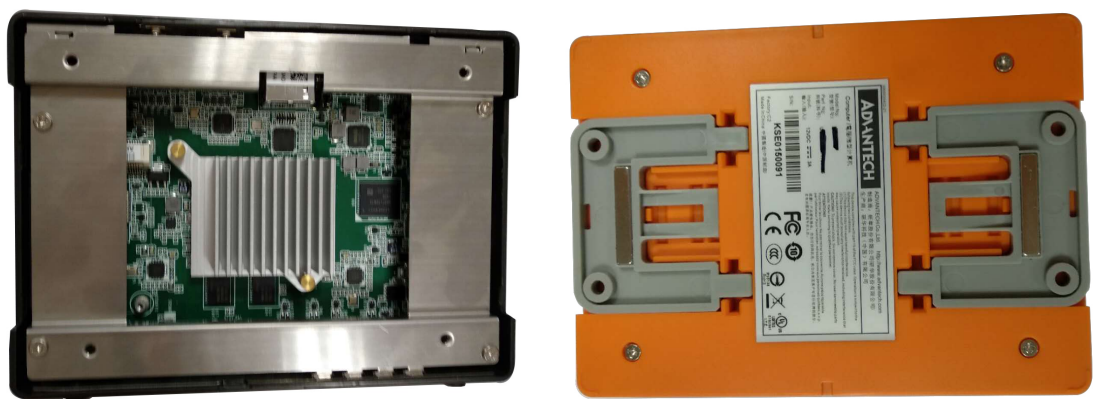
Step 5. Remove the two rubber plugs that cover the antenna holes. Attach the antenna connectors.



Step 6. Attach the antennas to the antenna connectors



Step 7. Replace the bracket and orange rear cover and secure in place.

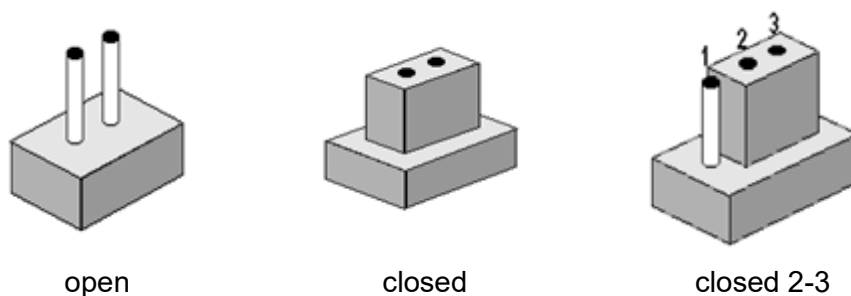




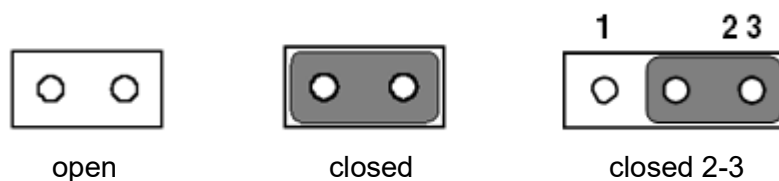
## 2.5 Jumper Settings

### 2.5.1 Jumper Description

Users can configure USM-110 according to their specific application requirements by setting jumpers. A jumper is the simplest type of electrical switch and consists of two metal pins and a small metal clip (typically protected by a plastic cover) that slides over the pins to connect them. To close a jumper, connect the pins with the clip. To open a jumper, simply remove the clip. Some jumpers have three pins, labeled 1, 2, and 3. With this type of jumper, connect either Pins 1 and 2, or Pins 2 and 3.

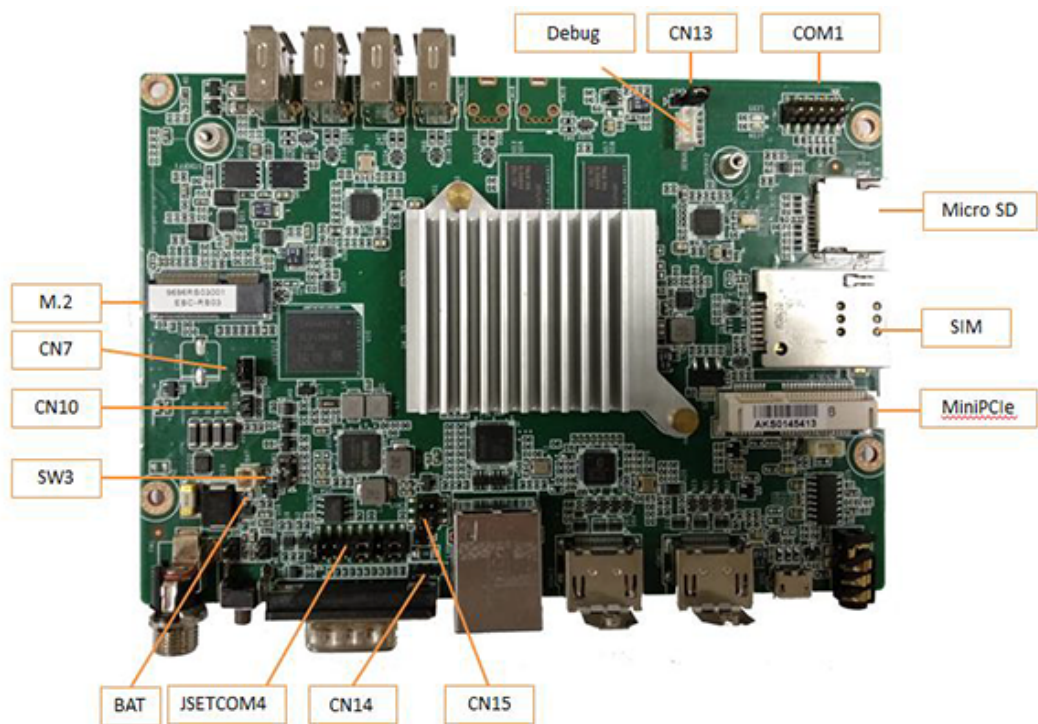


The jumper settings are schematically depicted below.



A pair of needle-nose pliers may be helpful when working with jumpers. If you have any concerns regarding the optimum hardware configuration for your application, contact your local distributor or sales representative before making any changes.

## 2.5.2 Jumper and Connector Locations



## 2.5.3 Jumper List

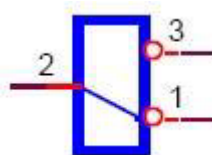
**Table 2.1: Jumper Lists**

SW3	AT & ATX Mode Switch
CN7	MASKROM Mode Select
CN13	COM2&Console Select
CN14	COM4 RS232/RS422/RS485 Mode Select 1
CN15	COM4 RS485/RS422 Impedance Select
JSETCOM4	COM4 RS232/RS422/RS485 Mode Select 2

## 2.5.4 Jumper Settings

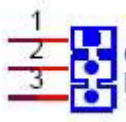
**Table 2.2: SW3: AT & ATX Mode Switch**

Setting	Function
(1-2)	ATX Mode (default A201-01 version)
(2-2)	Floating
(2-3)	AT Mode (default A101-01 version)

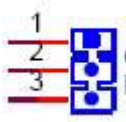


**Table 2.3: CN7: MASKROM Mode Select**

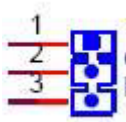
Setting	Function
(1-2)	Disable eMMC
(2-3)	Enable eMMC (default)

**Table 2.4: CN13: COM2 & Console Select**

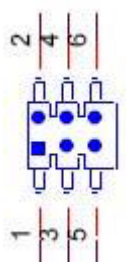
Setting	Function
(1-2)	COM2
(2-3)	Console (default)

**Table 2.5: CN14: COM4 RS-232/422/485 Mode Select 1**

Setting	Function
(1-2)	RS-232/422 Mode (default)
(2-3)	RS-485 Mode

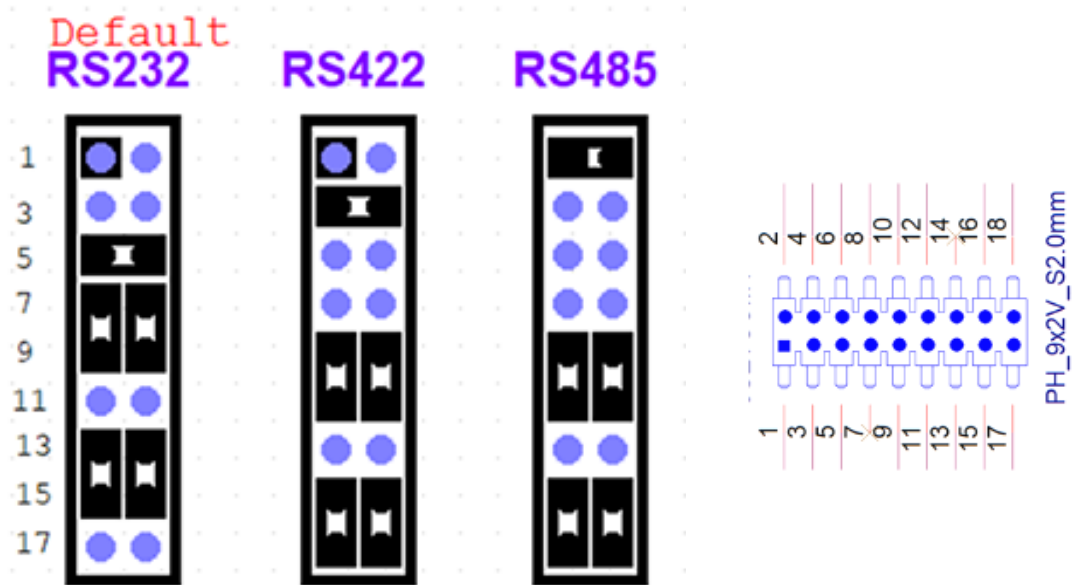
**Table 2.6: CN15: COM4 RS-485/422 Impedance Select**

Setting	Function
(1-3)	RS-485 Impedance Off (default)
(3-5)	RS-485 Impedance On
(1-3)&(2-4)	RS-422 Impedance Off (default)
(3-5)&(4-6)	RS-422 Impedance On



**Table 2.7: JSETCOM4 COM4 RS-232/422/485 Mode Select 2**

Setting	Function
(5-6) (7-9) (8-10) (13-15) (14-16)	RS-232 Mode (default)
(3-4) (9-11) (10-12) (15-17) (16-18)	RS-422 Mode
(1-2) (9-11) (10-12) (15-17) (16-18)	RS-485 Mode




# Chapter 3

Software


## 3.1 Operating System Updates

The USM-110 ultra-compact digital signage player is pre-installed with the latest OS version. However, users may wish to update or change the OS. This chapter explains the procedures for OS installation and upgrade.

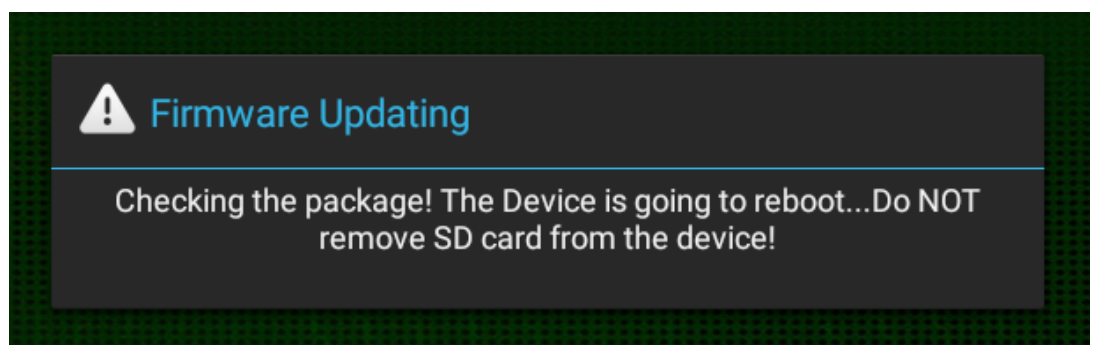
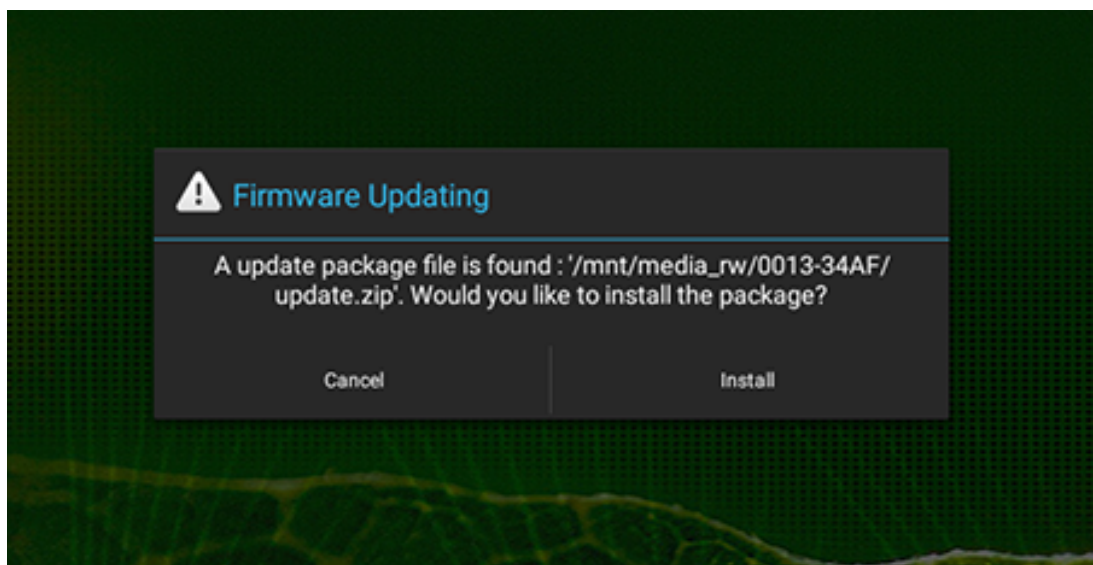
**Note!**  Some distributors and system integrators may have pre-installed system software prior to shipment. Check with your sales representative for further information.

### 3.1.1 Update via USB (Recommended)

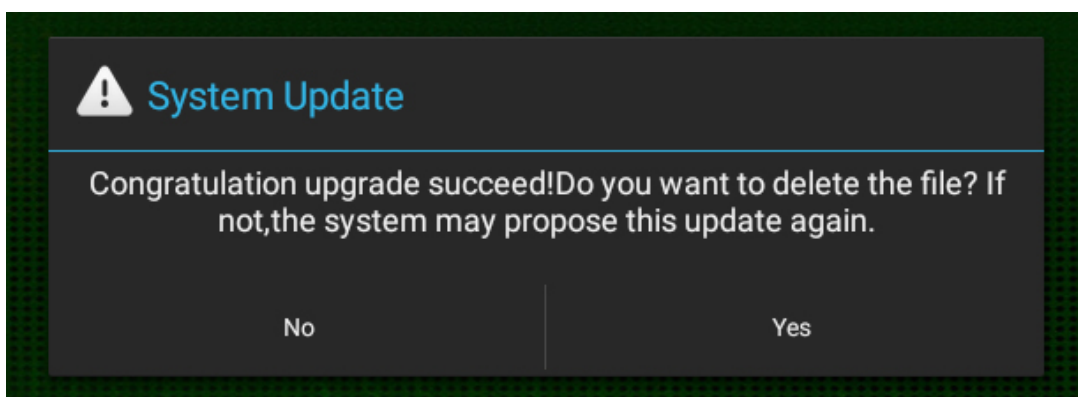
The OS can be updated via USB. After powering on the device, insert a USB flash drive loaded with the OS update package into a USB 2.0 port. The opening screen of the setup/installation utility should appear automatically. Simply follow the onscreen instructions to update the OS.

- Note!**  1. The name of the image package file must be “update.zip” (rename the file if necessary). Do not unzip the .zip file.
2. This update method can only be used for updating images based on the same OS version (e.g., updating image V2200 to V2400 on same Android 6.0 OS).

Step 1. Click “install” to install the update package.



Step 2. Click “Yes” to delete the update package from the USB flash drive. Click “No” to retain the update package for future use.



### 3.1.2 Firmware Update via SD Card

Preparation

- One computer equipped with Windows OS
- One micro SD card (at least 4 GB storage)
- Download “SD\_Firmware\_Tool.\_v1.46” from the Advantech website

#### 3.1.2.1 SD Card Configuration

Step 1. Execute “SD\_Firmware\_Tool.\_v1.46\SD\_Firmware\_Tool.exe”

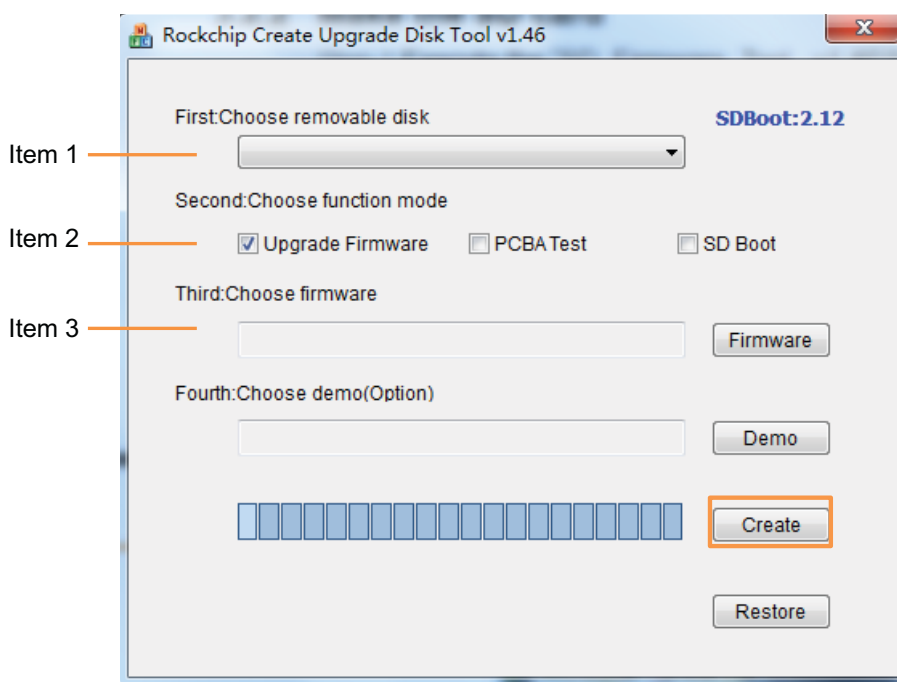
Step 2. Insert the SD card into the device and configure the firmware tool as explained below:

Item 1. Select “SDHC card”

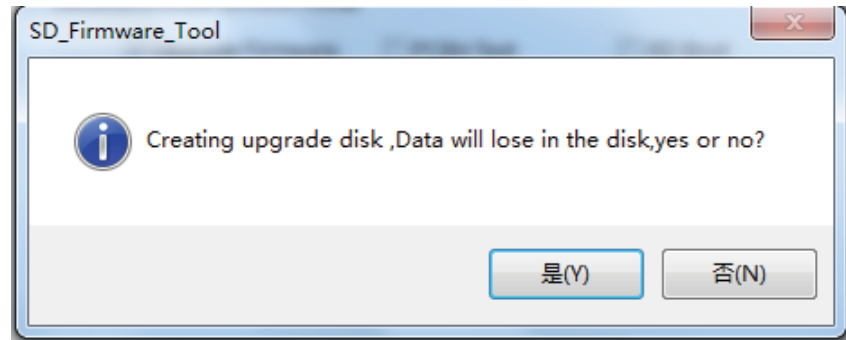
Item 2. Select “Upgrade firmware”

Item 3. Select the “update.img” file

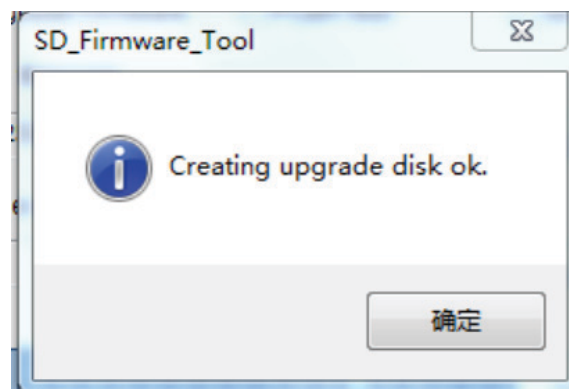
Step 3. Click “Create”



Step 4. A pop-up dialog window will appear, select “yes”.

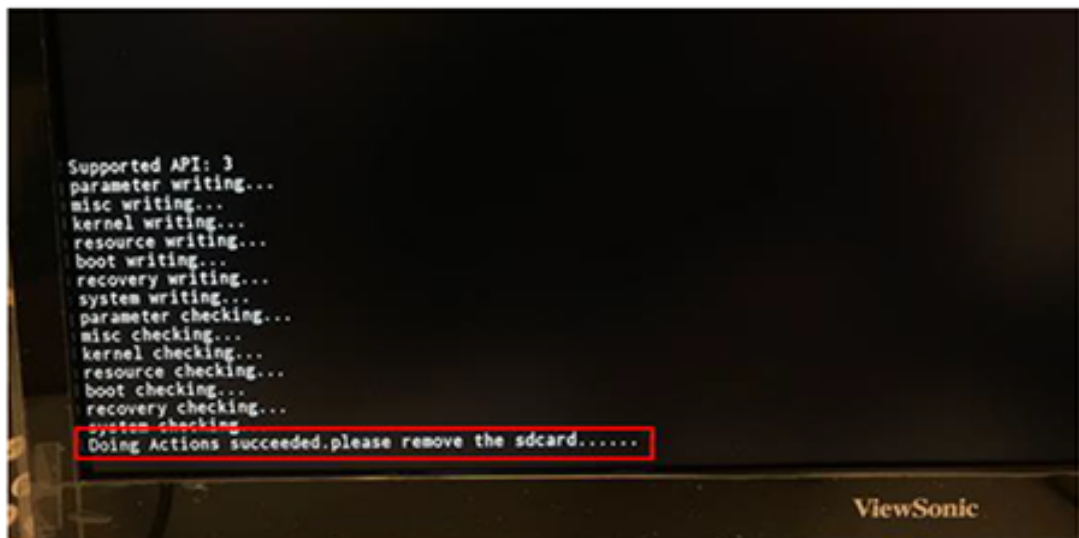


Step 5. Another pop-up dialog window will appear, click the “确定” button.



### 3.1.2.2 Device Image Update

Insert the SD card into the USM-110 SD slot and power on the device. Follow the instructions provided on screen to complete the update process. Upon completion, remove the SD card and restart the device.



**Note!** The USM-110 digital signage player must be connected to a client device/display in order for users to view the update status





## 3.2 Operating System Change (Via OTG)

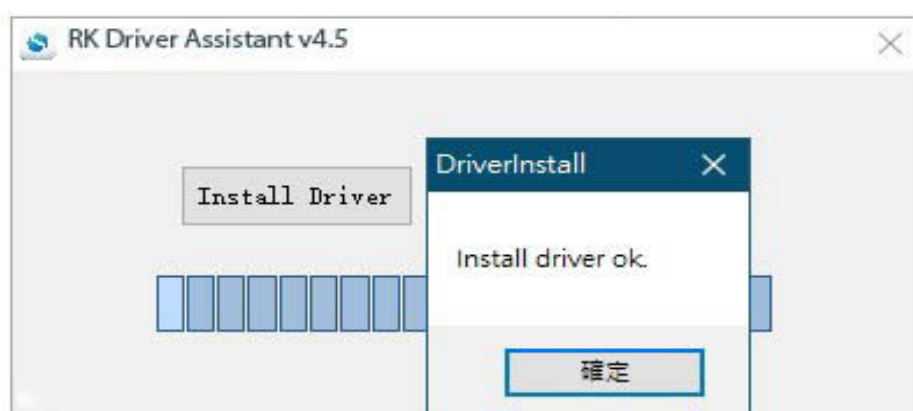
To change the system OS from Linux to Android or from one version to another (i.e., Android 6.1 to Android 8.1), the OTG method must be used to burn the image in order to rewrite all DDR and eMMC memory.

### 3.2.1 Preparation

- One device equipped with a Windows OS - either XP, Windows 7 (32/64 bit), or Windows 8 (32/64 bit)

### 3.2.2 Driver Installation

Double click on the “DriverInstall.exe” file to install the driver on the Windows-based device (file path: DriverAssistant\_v4.5\DriverAssistant\_v4.5). Click “Install Driver” for driver installation. After successful installation, an “Install driver ok” message will appear onscreen.



### 3.2.3 Version Upgrade

1. Remove the rear cover and shell bracket by unscrewing the four affixing screws.
2. Configure the CN7 jumper by connecting Pins 1 and 2 instead of the default position of Pins 2 and 3 (refer to the red arrow in Figure 3.1).
3. Power on the USM-110 digital signage player and connect it to a client device via OTG.

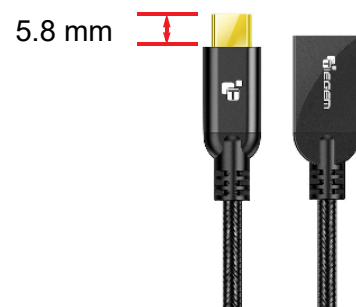
**Table 3.1: CN7: MASKROM Mode Select**

Setting	Function
(1-2)	Disable eMMC
(2-3)	Enable eMMC (default)

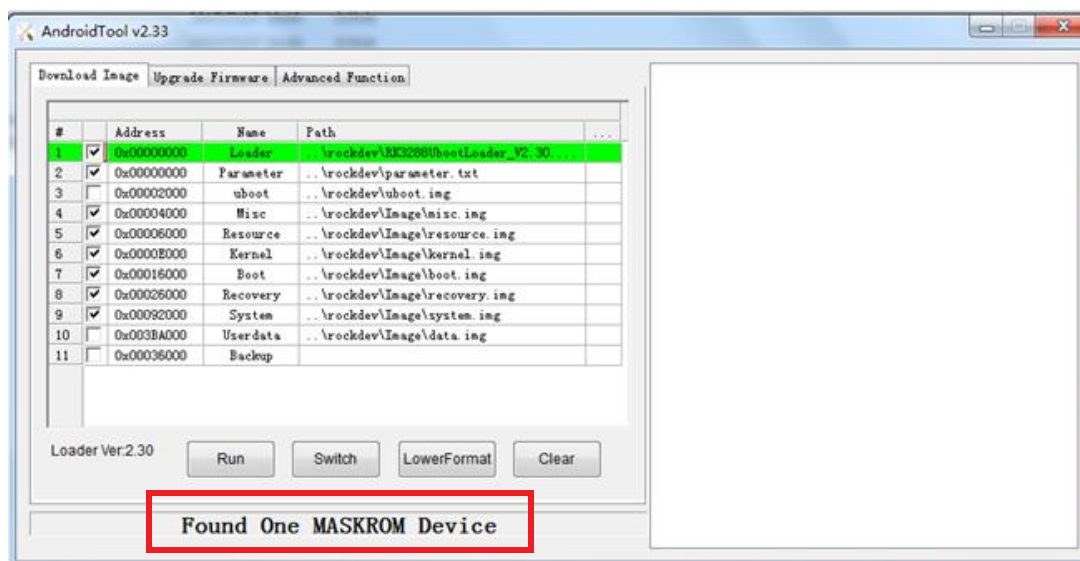


**Figure 3.1 USM-110 Mainboard**

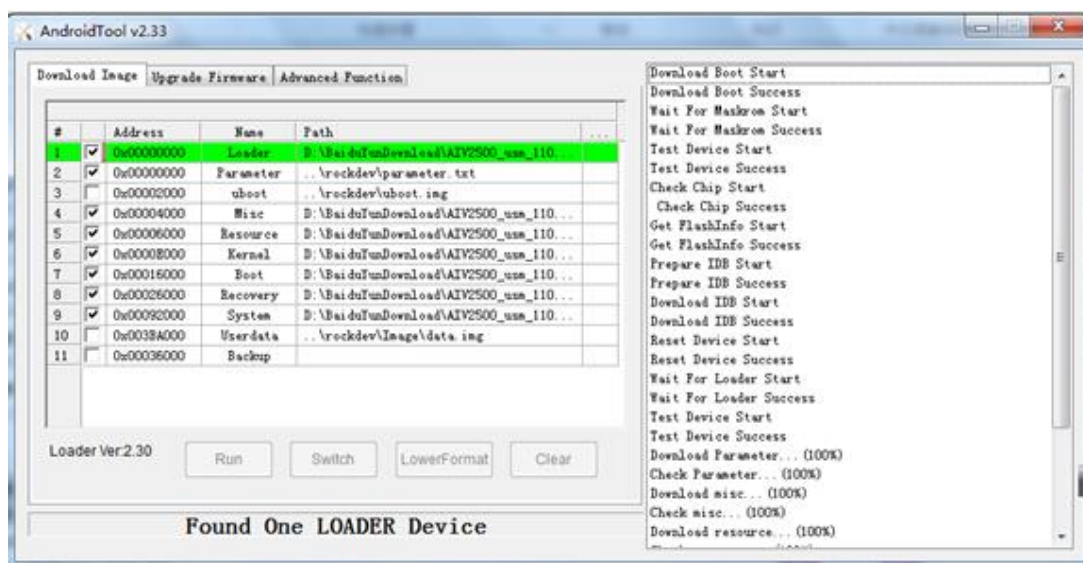
- Note!**
1. The OTG cable must have a 5.8 mm jack connector.
  2. The OTG cable must feature an ID pin (to facilitate data transfers).



- Execute the burn tool file “AndroidTool\_Release\_v2.33\AndroidTool.exe”. When the user interface reports that a MASKROM device has been located, the CN7 jumper must be configured as 2-3.



- Click “Run”. The status of the burn process will be displayed in the right frame of the user interface. After image burning is complete, the user interface will report “found one loader device”.



## 3.3 System Development

This chapter introduces the USM-110 software development process to allow users to develop unique application(s).

Because USM-110 is designed to support a Linux host, developing on a Windows/Android-based PC may result in compatibility issues. Currently, the officially supported host OS version is Ubuntu 14.04 LTS (64 bit).

We strongly recommend installing Ubuntu 14.04 LTS (64 bit) on your host PC before beginning USM-110 evaluation/development.

### 3.3.1 Build Environment Setup

All instructions in this guide are based on the Ubuntu 14.04 LTS (64 bit) OS.

Ubuntu 14.04 LTS (64 bit) must be installed in advance with at least 4 GB DRAM. After installation, log into the system and perform following:

#### 3.3.1.1 Install Docker

To use Docker for development it must be installed on your platform. Refer to the Docker Installation Guide for reference. Docker can be installed on Linux, Cloud, Windows, and OS X. Generally, we recommend installing on Ubuntu.

#### 3.3.1.2 Get Base Image

Use `docker pull <IMAGE REPOSITORY>` to obtain the images provided in the image list.

```
# docker pull advrisc/u14.04-rk3288abv1
```

#### 3.3.1.3 Obtain Android Source Code

Related version information:

- Android 6.0.1
- Kernel 3.10.0
- U-Boot 2014-10

Obtain the source code from your sales representative or Advantech technical support, then pull down the Android source tree to your working directory.

#### 3.3.1.4 Building Android 6.0.1 image

##### Start Docker Container

```
# docker run -it --name android6.0-build -v /home/adv/myandroid:/home/adv/android6.0:rw  
advrisc/u14.04-rk3288abv1 /bin/bash
```

##### Build Instructions

Set the `$JAVA_HOME` environment variable

```
Set the $JAVA_HOME environment
```

Set up the environment for building. This only configures the current terminal.

```
$ source build/envsetup.sh
```

Execute the Android launch command. In this example, the setup is for the production image of the Advantech RISC platform device with user debug type. If your device is RSB4680, the system will send the command “launch rsb4680-userdebug”.

```
$ launch $PRODUCT-userdebug
```

### To build boot loader

Perform the following command in the terminal console

```
$ cd u-boot/  
$ make rk3288_rsb4680a3_2G_defconfig  
$ make -j4
```

The one file, RK3288UbootLoader\_V2.30.10.bin, will be located in directory

### To build kernel image

Perform the following command in the terminal console

```
$ cd kernel/  
$ make rk3288_adv_defconfig  
$ make -j4 rk3288-rsb4680-a3.img
```

### To build system image

Perform the following command in the terminal console

```
$ make -j4  
$ ./mkimage.sh
```

All android images will be generated in the rockdev/Image-rsb4680/ folder

## 3.3.1.5 Problems and Solutions

### 1. Compiled kernel

```
/bin/sh: 1: /home/zengwei/android_rk3288_android6.0/kernel/scripts/gcc-wrapper.py: Permission denied  
make[1]: *** [kernel/bounds.s] Error 126  
make: *** [prepare0] Error 2  
make: *** Waiting for unfinished jobs....  
HOSTCC scripts/dtc/dtc-parser.tab.o  
HOSTLD scripts/dtc/dtc  
make: *** [scripts] Error 2  
Solution  
$ chmod 555 kernel/scripts/gcc-wrapper.py
```

### 2. Compiled android? Please copy this file before compiling

```
$ cp .repo/manifests/default.xml manifest.xml
```

### 3.3.2 UART

Users can access the Android/Linux UART serial ports via tty-devices. The tty-devices have different names depending on the UART driver on different boards.

RS-485 uses half-duplex communication, which means that one medium is used for transmitting and receiving data. Therefore, the RS-485 transceiver transmit mode must be controlled. Typically, the UART RTS signal is used to switch the transmitter on and off.

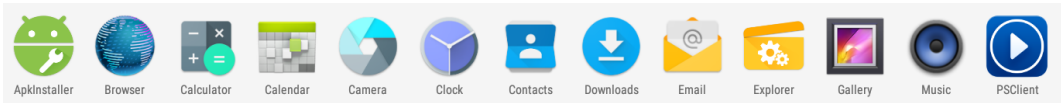
COM Name	Device Node	Remark
UART0	/dev/ttyS0	for BT data
COM1	/dev/ttyS1	
COM2	/dev/ttyS2	Debug port/RS232
COM3	/dev/ttyS3	
COM4	/dev/ttyS4	Support RS-485/422

# Chapter 4

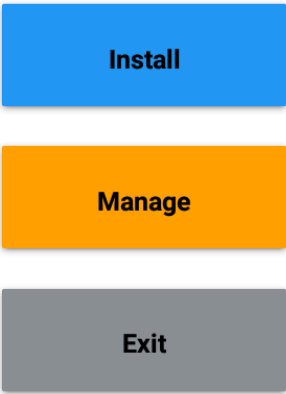
## System Setup

# 4.1 APK Installation

Step 1.Navigate to the USM-110 program menu and click on the “Apkinstaller” icon.



Step 2. Choose the “Install” option.



Step 3. Select the storage disc where the APK is located.

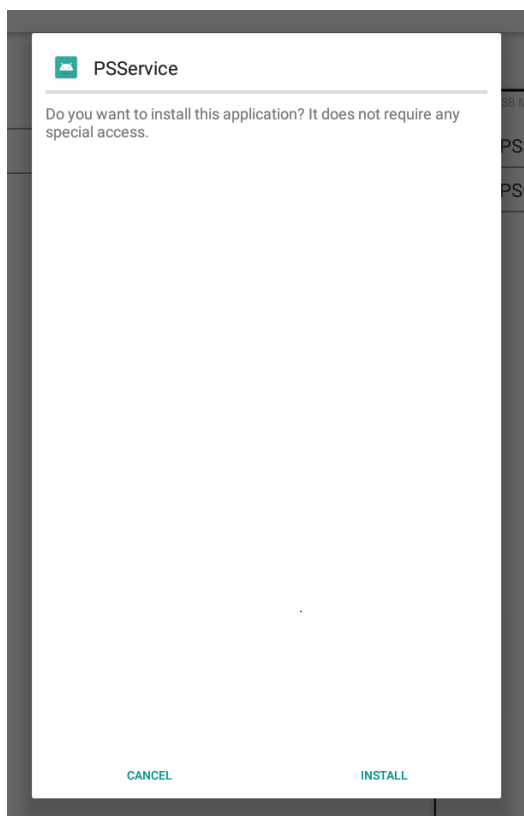


Step 4.Select the APK that you want to install.

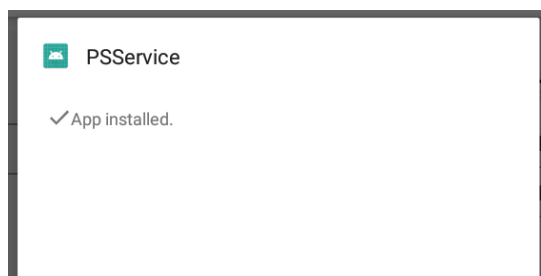




Step 5. Click “Install”.

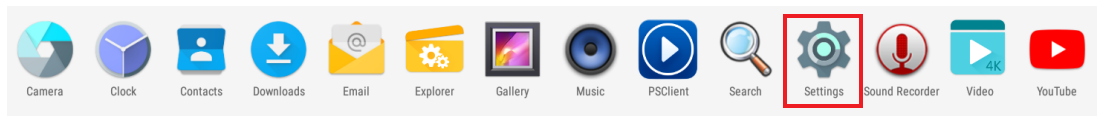


Step 6. Click “Done” to complete the APK installation.

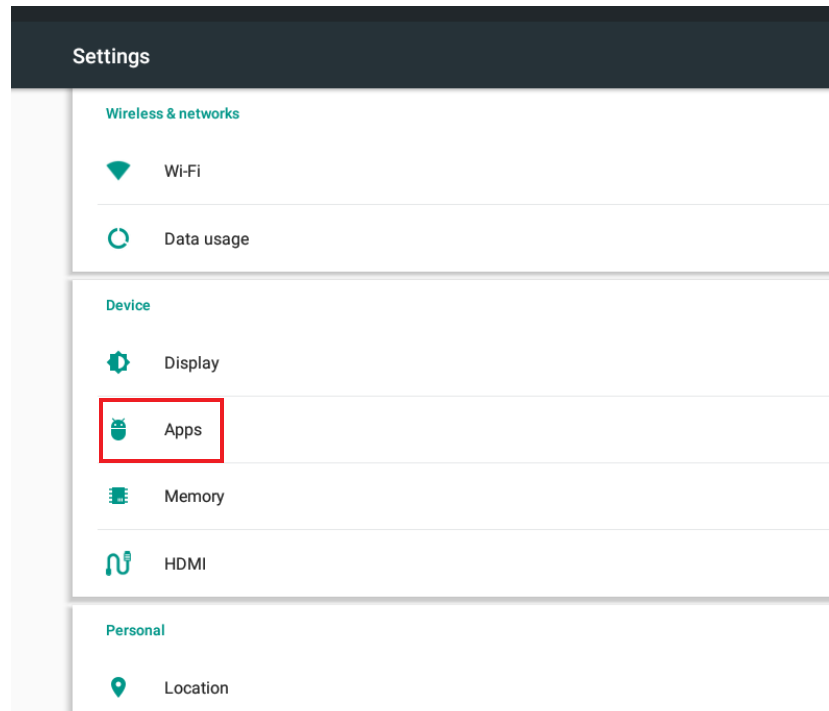


## 4.2 APK Uninstall/Removal

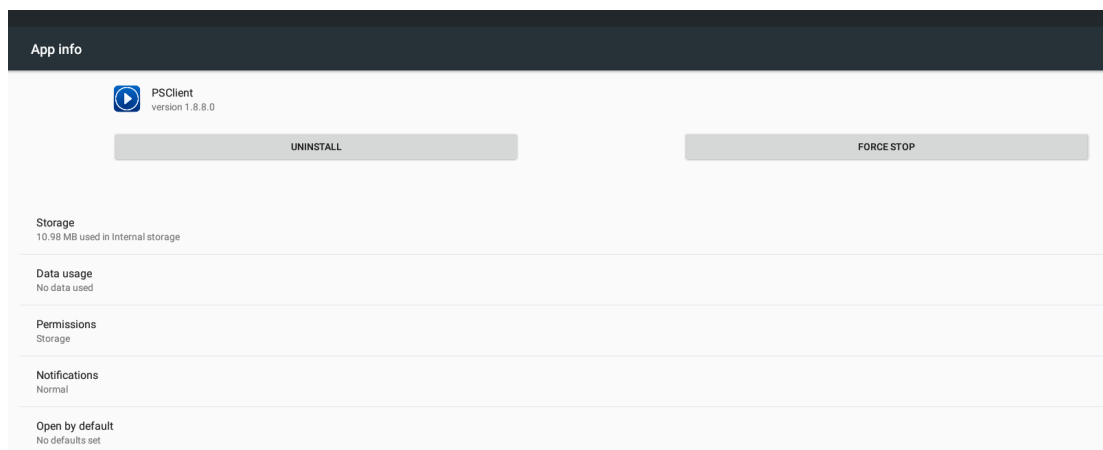
Step 1. In the program menu, click the “Settings” icon to access the system settings functions.



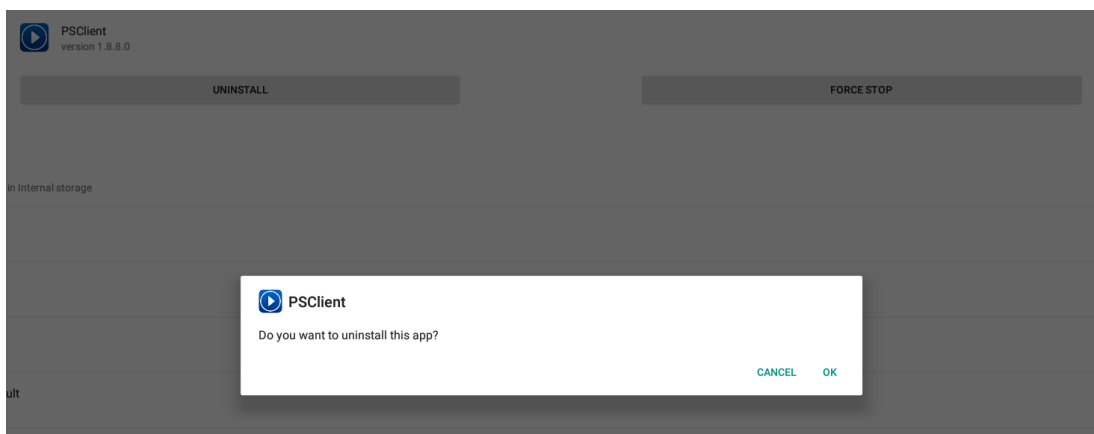
Step 2. Click on the “Apps” item, and select the APK to remove from the app list.



Step 3. Click the “Uninstall” button to initiate the uninstall process.



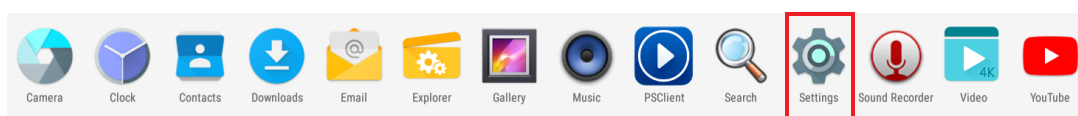
Step 4. Select “OK” to begin uninstalling.



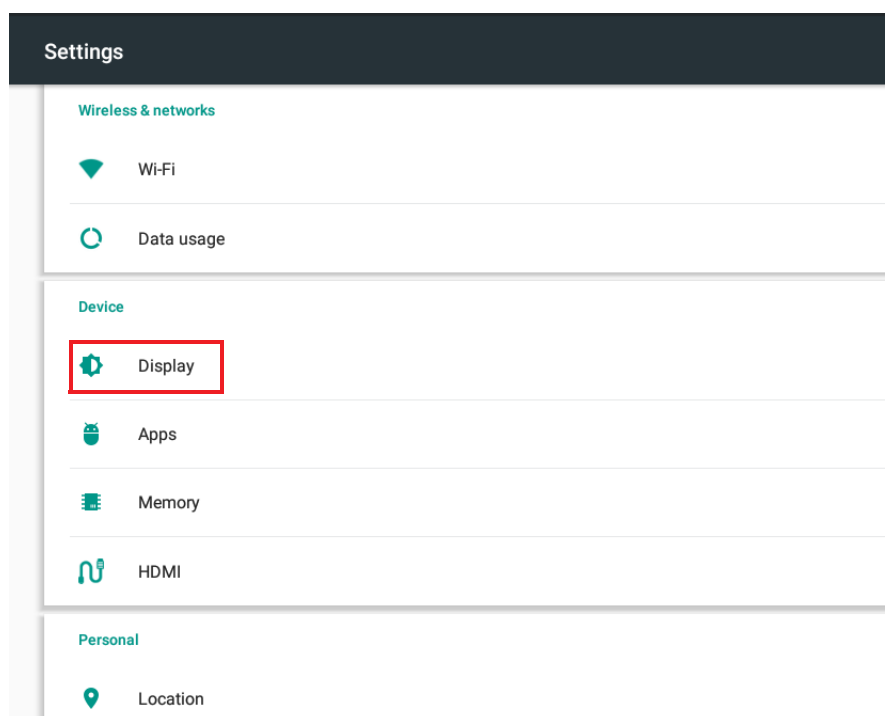
## 4.3 System Settings

### 4.3.1 Screen Rotate

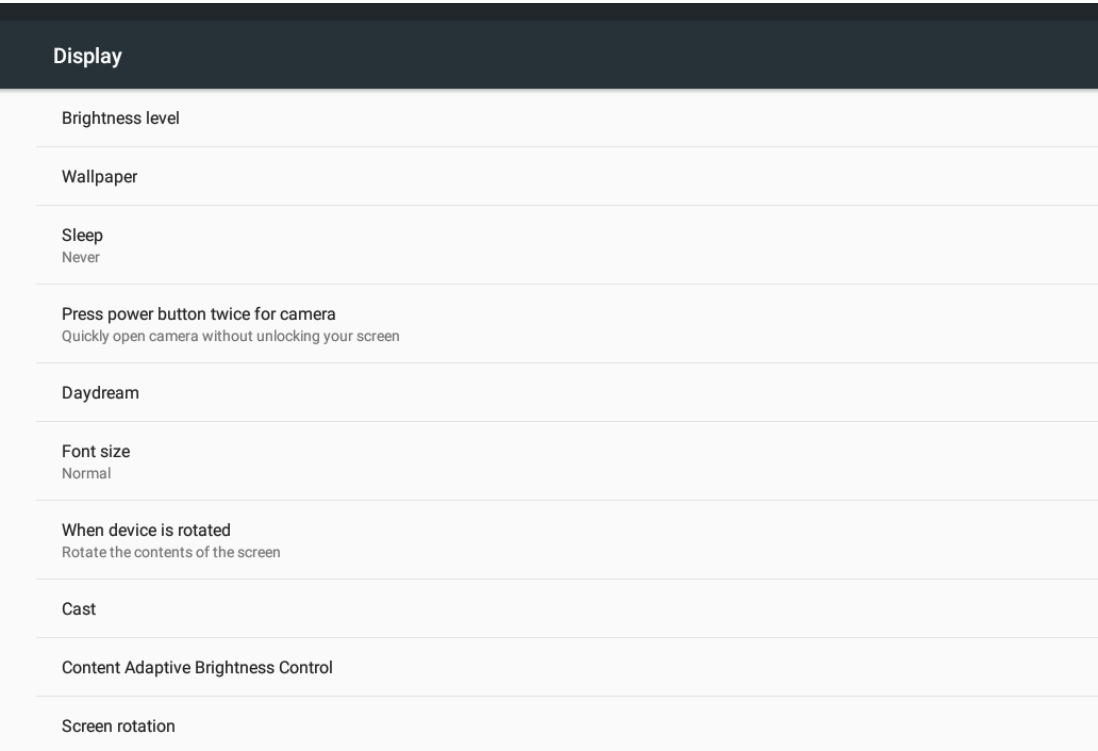
Step 1. In the program menu, click the “Settings” icon to access the system settings functions.



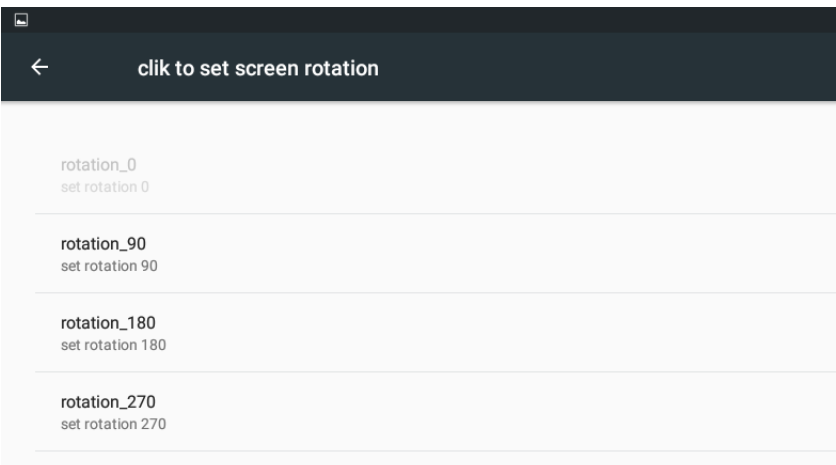
Step 2. Click on the “Display” item.



Step 3. Select the “Screen rotation” function.

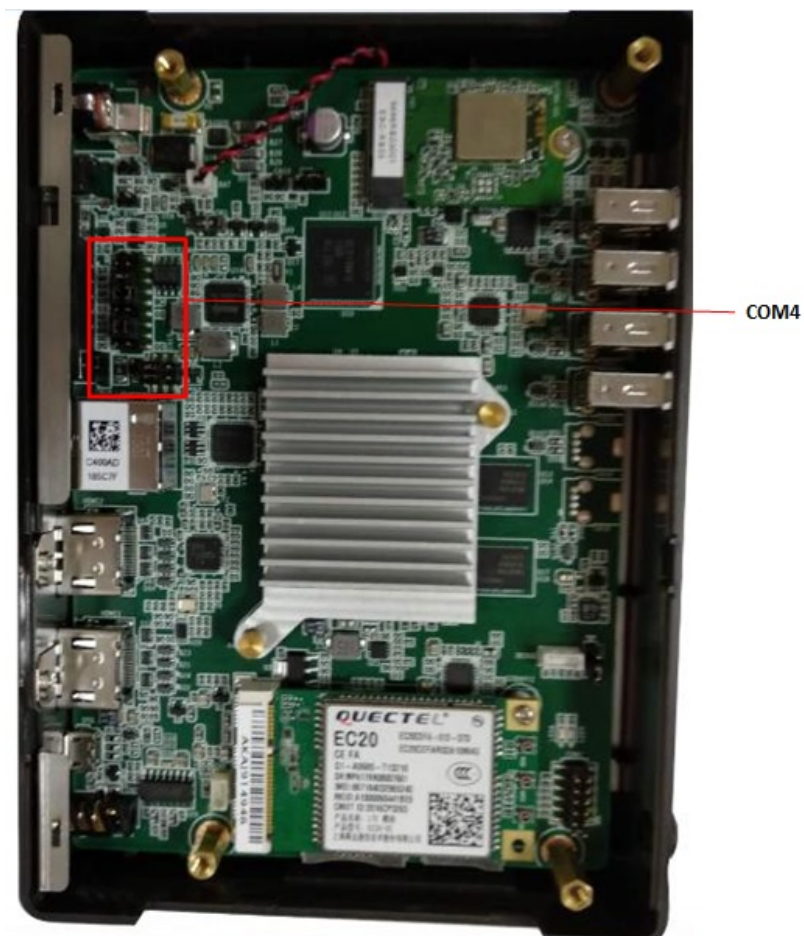


Step 4. Choose the desired rotation degree.

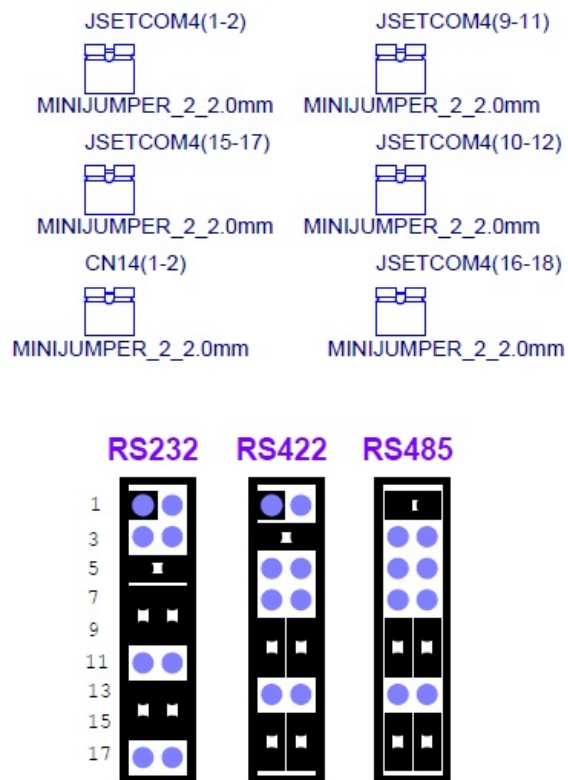


### 4.3.2 RS-232/422/485 Settings

1. Remove the USM-110 top cover.
2. Locate the COM4 connector.



3. Reference Figure 4.1 in the USM-110 user manual (shown below) to configure the RS-232/422/485 jumper settings.



**Figure 4.1 RS-232/422/485 Jumper Settings**

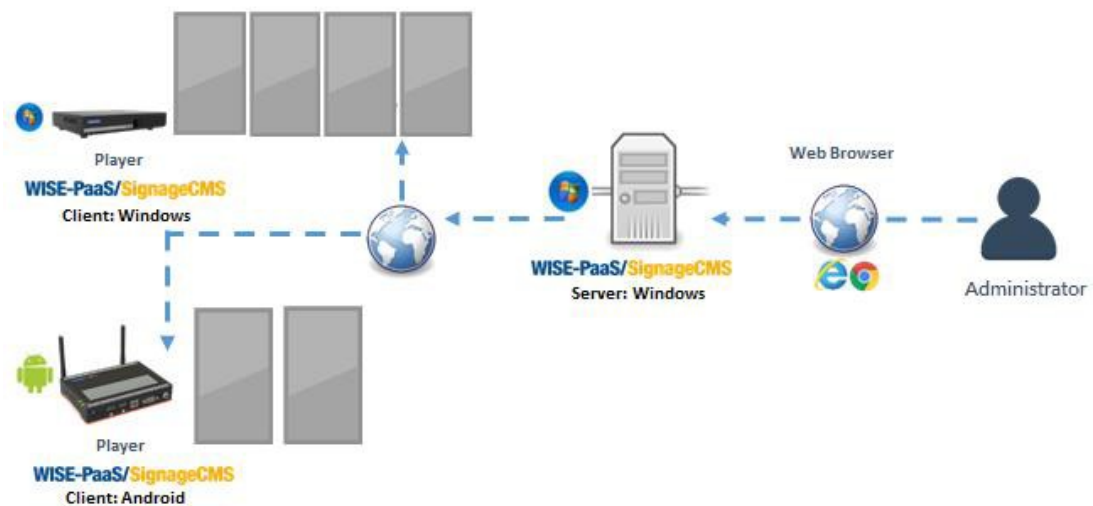
# Chapter 5

WISE-PaaS/  
SignageCMS

## 5.1 WISE-PaaS/SignageCMS Architecture

WISE-PaaS/SignageCMS is a client-server software platform for editing and dispatching digital signage content. The server software must be installed on a Windows OS; however, the client software can be installed on various OS.

To ensure convenient operation, the USM-110 digital signage player is pre-installed with the relevant client software. Advantech's WISE-PaaS/SignageCMS software allows users to connect to the server remotely via any web-based browser (the network must be in the same network segment). When connected to the server, users can edit signage content online and dispatch the content to multiple displays. The number of client devices/displays supported by each server depends on the network conditions.



For more detailed information regarding the operation of WISE-PaaS/SignageCMS, download the user manual via the link below.

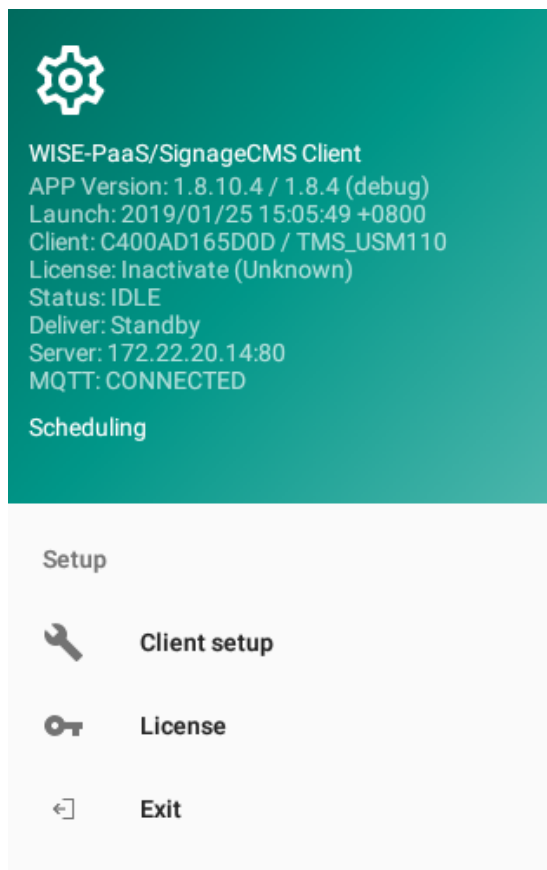
<https://support.ushop-plus.com/download>



## 5.2 WISE-PaaS/SignageCMS Configuration

### Client Configuration

1. Power on the device and ensure network connectivity. Open the PSClient app.
2. Navigate the mouse cursor to the left of the screen to access the Client Setup menu (as shown in Figure 5.1).



**Figure 5.1 Client Configuration**

### Client Setup Page (Figure 5.2)

3. Input the IP address of the server in the [server] field.
4. Make note of the [Client ID] or [Custom ID] (if the “Use Custom ID” checkbox is selected\*).
5. Click the “Silent Installation” checkbox to enable automatic updates.

\*The [Client ID] or [Custom ID] is required for the [Client Device] field in the server system settings.

Client ID

C400AD165D0D

☒ Use Custom ID

TMS\_USM110

Server

172.22.20.14

Port

80

General Setup

☐ Auto Restart SignageCMS Client

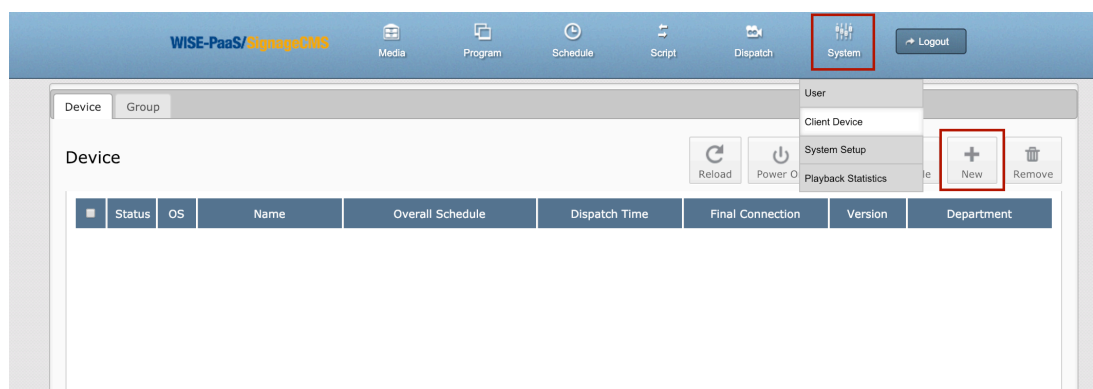
☐ Silent Installation

☒ Device Administration

**Figure 5.2 Client Setup Page**

## Server Configuration

1. Open the server system interface installed on the server device. Select the Client Device option in the dropdown menu, then click the [New] button at the top right corner of the interface (as shown in Figure 5.3).



**Figure 5.3 Server Configuration**

## Device Edit Page (Figure 5.4)

2. Input the device name into the [Name] field.
3. The [Client ID] field should be based on the client system settings.
  - Option 1. If [Use Custom ID] is selected, input the [Custom ID] value set in the client system.
  - Option 2. If [Use Custom ID] is not selected, input the [Client ID] value set in the client system.
4. Click [Save & Exit].

**Device Edit**

**Information**

Name

Client ID

Client IP

Client volume

**Version**

☐ Auto shutdown ☐ Auto wakeup

Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐

Friday ☐ Saturday ☐ Sunday ☐

This function will become "Turn On/Off Screen" in Android device.

**General Setup**

☐ Auto Restart SignageCMS Client

☐ Silent Installation

☒ Device Administration

**Save & Exit** **Save** **Close**

Figure 5.4 Device Edit Page - 1

5. Navigate to the Device page of the interface to access the device list. Check the Status column. A green check (as shown in Figure 5.5) means that the device has been added successfully.

**Device**

Reload Power On Restart Upgrade New Remove

Status	OS	Name	Overall Schedule	Dispatch Time	Final Connection	Version	Department
<input checked="" type="checkbox"/>	Windows	昆山 Retail AI	Retail AI	2018-08-01 16:32:50	2019-01-28 00:12:46	1.8.4	HS
<input type="checkbox"/>	Android	ICHEN9599	schedule_test	2018-10-15 18:12:30	2018-10-18 21:18:05	1.8.6.0	HS

Figure 5.5 Device Edit Page - 2

## 5.3 WISE-PaaS/SignageCMS Remarks

The USM-110 device's primary output is HDMI1. HDMI2 is a secondary output. Use of an extension module may be influenced by the following limitations:

- Audio input is only supported on HDMI1.
- Mouse, keyboard, and touch control is only supported on HDMI1.
- The USM-110 device can support dual displays but cannot support the presentation of a single video or image across two displays (as shown in Figure 5.6).

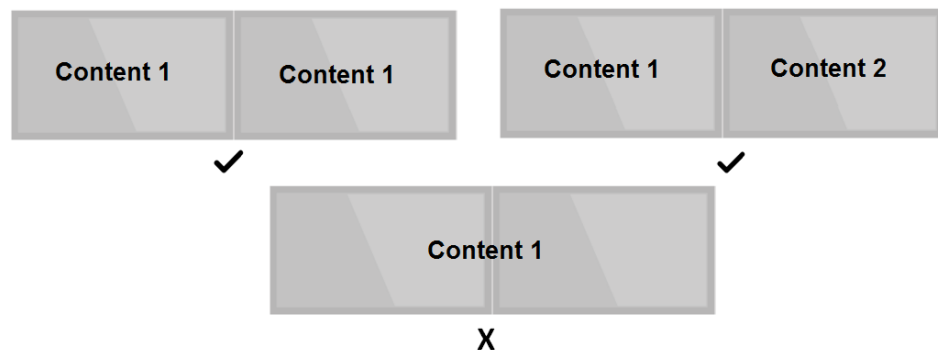


Figure 5.6 Dual Display Support

When using an extension module to support dual displays, locate the display connected to HDMI1 on the left or on top (as shown in Figure 5.7).

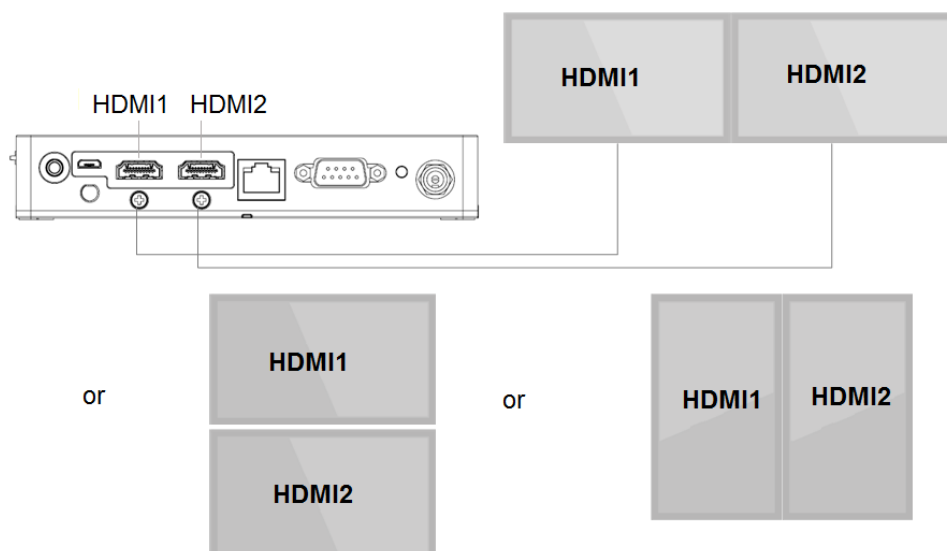


Figure 5.7 HDMI Output Layout





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