Product specification

LCD Controller

HD-M21B

V3.0 20210611

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Chapter 1 Product Overview

I. Overview

HD-M21B is a well-built all-in-one LCD Android smart play box, using Rockchip RK3288 quad-core chip solution, equipped with Android 7.1.2 system, main frequency up to 1.8GHz, with super performance. Using Mali-T764 GPU， support AFBC(frame slower compression), 4K/H.265 hard decoding, 1080P video decoding, HDMI interface supports 4K output, 4K video play mode. Supports U-disk, TF card, Wi-Fi, network port and other interfaces, making the product more versatile, and is widely used in intelligent control fields such as advertising machines, interactive all-in-one machines, security, medical care, transportation, finance, industrial control, etc. Due to its hardware platform and Android intelligent features, it can be used on the smart terminal motherboard when human-computer interaction or network device interaction is required, which can be your best choice.

II. Features

- High performance. RK3288 chip adopts quad-core ARM Cortex-A17 architecture, the main frequency can be as high as 1.8GHz, compared with common single-core, dual-core and quad-core solutions on the market. A qualitative leap in performance, capable of playing various formats of high-definition video screens, and capable of handling complex interactive operations

- High stability. The RK3288 Android integrated board adds its own unique technology to the hardware and software to ensure the stability of the product, so that the final product can be unattended for 7*24 hours.

- High integration. integrates functions such as Ethernet, Wi-Fi, power amplifier, TF expansion card, USB expansion port, HDMI, etc., which greatly simplifies the installation of the whole machine.

- High definition. Supports LCD display screens with HDMI interface, and supports cropping screens of various sizes and resolutions.

Chapter 2 Product Specifications

I. Basic Parameters

1. Hardware Parameters

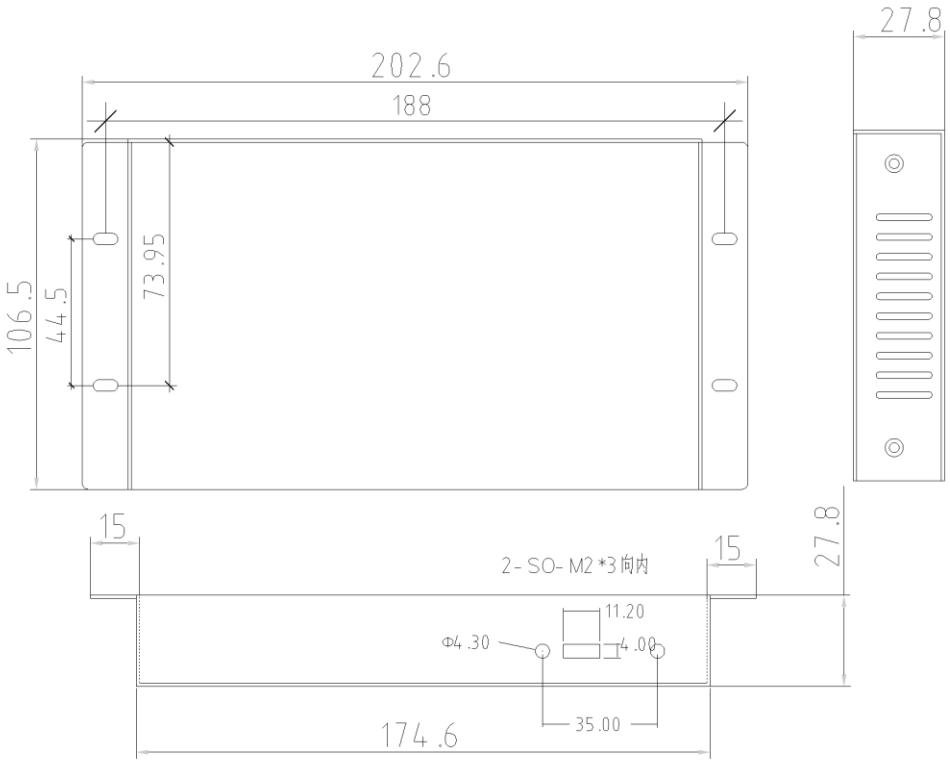
Hardware Parameters	
CPU	RK3288, Quad-core, the highest frequency 1.8GHz， Android 7.1.2
GPU	Mail-T764 GPU MP4 Quad-core GPU Supports OpenGL ES1.1/2.0,OpenVG1.1,OpenCL
RAM	DDR3, 2GB
Built-in storage capacity	eMMC 8GB (16/32/64 GB) TF Card expansion (can be used to expand SSD)
Connection	Support RJ45 100M Ethernet port and Ethernet. Support 2.4G Wi-Fi and Wi-Fi 802.11b / g / n protocol.
Image rotation	Support 0 degree, 90 degree, 180 degree, 270 degree manual rotation
Display interface	1 HDMI 1.4 support 4K output
Audio	Support standard left and right channel line output
RTC	Built-in real-time clock function
USB	1USB-2.0 HOST, 1 USB2.0 or OTG
LED	1 * power status LED (green), 1 * system LED (green, blinking by default)
Button	1 * Recovery button
Power Adapter	Input: AC100-240V.50-60Hz, output: DC12V 1.5A (Requires that the surge voltage is less than 18V and the ripple voltage is less than 100mV)
Storage Humid	10%～90％ RH
Storage Temp	-40℃~70℃
Work Temp	-20℃~70℃

2. Software Parameters

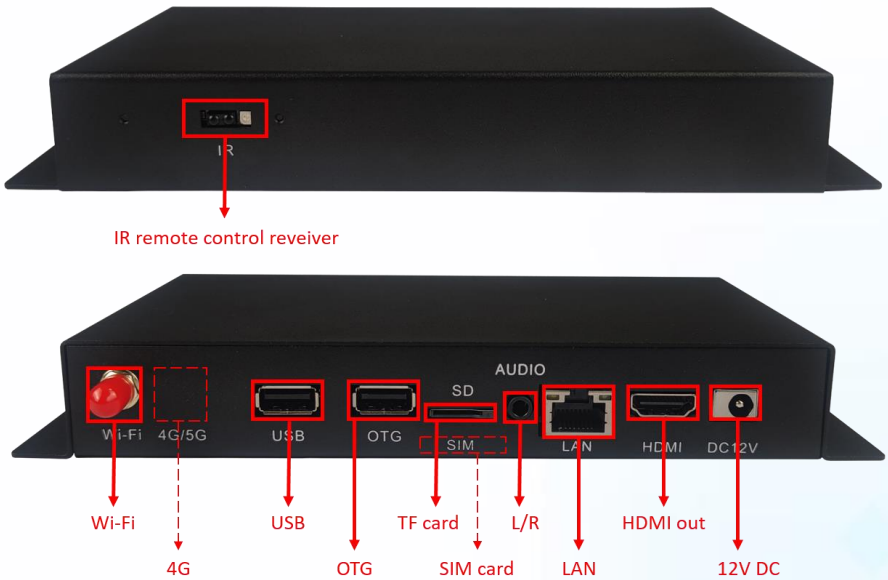
Software Parameters	
Operating system	Android 7.1.2
Audio	MP3,WMA,WAV, APE, FLAC, AAC, OGG,M4A,3GPP, etc.
video	Support H.264, VP8, MAV, WMV, AVS, H.263, MPEG4 and other video formats 1080P multi-video decoding
image	Support various picture formats such as JPG, BMP, PNG
System comes with application software	APK installer, email, calculator, browser, recorder, calendar, settings, clock, video player, search, contacts, gallery, download, camera, music, explorer, etc.
Language	support multi-language
Typewriting	Standard Android keyboard, optional third-party input method
System Management	The original ecological Android system, open root permissions, can be customized product development
	Real-time remote monitoring, self-recovery of system crash, 7 * 24 hours unattended
	Support OTA remote upgrade; support U-disk upgrade
	Support boot animation definition
	Support server / standalone mode switch
	Support Wi-Fi hotspot
System watchdog	Support software watchdog

II. Product Size Specifications

Side interface size (boxed)



III. Product Interface Diagram



IV. Interface parameter description

1. PWR / DC (power input) interface

12V DC power supply is used to supply power to the board subsystem only from the DC socket and power Socket.

2. HDMI output

Connect to the LCD screen for program display

3. LAN Port

Connect to the Internet/LAN to realize Internet remote cluster management and LAN cluster management.

4. Audio interface and reset control

1. Standard 3.5mm dual-channel audio interface, which can be directly connected to low-

power speakers or amplifiers.

2. The reset hole is hidden in the audio port. Long press with a long reset needle to restore the factory settings.

5. TF card slot

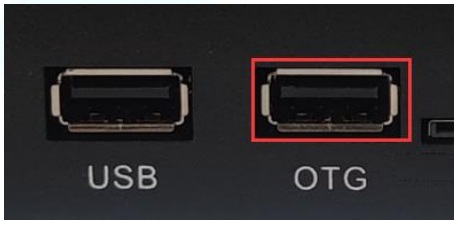
Insert the TF card to update the program content.

6. SIM card slot (Optional)

Install the 4G mobile phone card interface, and realize remote cluster management after connecting to the Internet (4G module needs to be installed, 4G module is not standard configuration, according to user needs to install before leaving the factory).

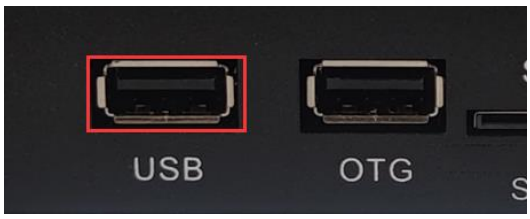
7. OTG Port

Upgrade firmware and other functions, the box can be customized as a USB interface through jumpers before assembly.



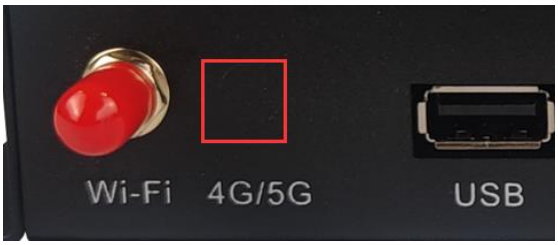
8. USB Port

Insert the U disk to update the program of the display screen. One of the USB interfaces can be switched to OTG or USB interface through jumpers (OTG and USB need to be set before the factory).



9. 4G Antenna Port（Optional）

Connect 4G antenna to enhance 4G signal.（Non-standard interface, closed by default）



10. Wi-Fi Antenna Port

Connect Wi-Fi antenna to enhance Wi-Fi signal.

11. IR Receiver Port

Receiving remote control signal, setting and programs switching.

Chapter 3 Communication Methods

I. Update Programs by Wi-Fi

Mobile APP-"LedArt" download

Search and download "LedArt" in major mobile phone application markets, or scan the following QR code to download and install

QR code download

II. Update Program with U-disk

U-disk update programs

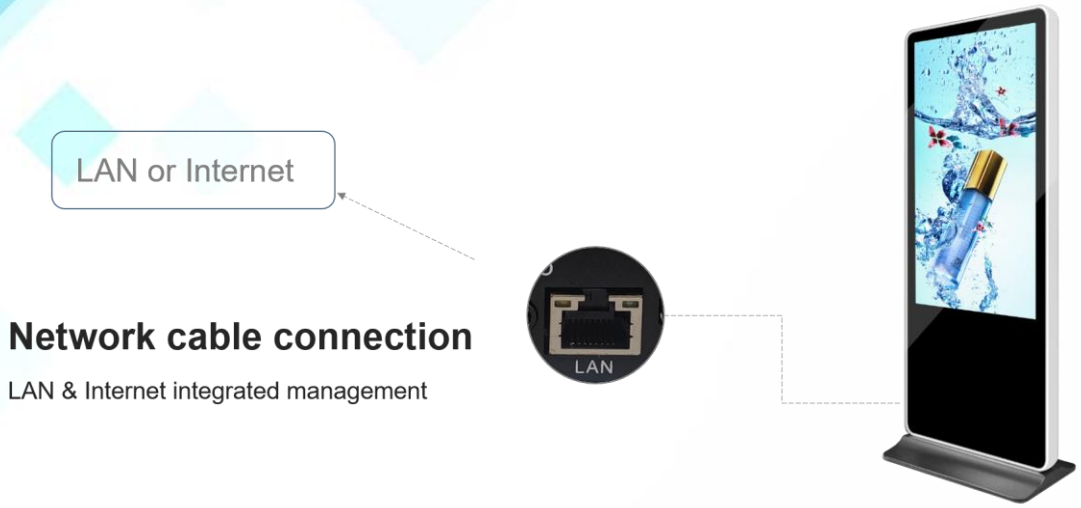
Support Interstitial & memory expansion

III. Update Program by TF Card

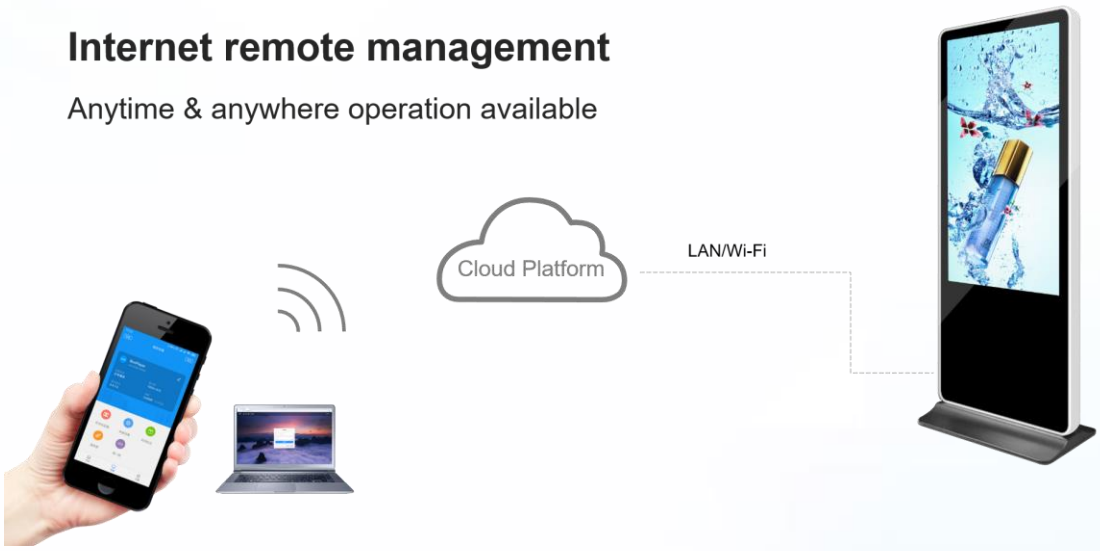
TF card update programs

Support Interstitial & memory expansion

IV. Update Programs with LAN



V. Update Programs by the Internet



Chapter 4 Product Appearance

Note:

1. The 4G module is an optional accessory, installed in the playback box before leaving the factory;

2. Non-standard features, the picture of the specification may be slightly different from the actual product, if you have any questions, please contact Huidu Technology for confirmation;