灰度科技
HUIDU TECHNOLOGY

PRODUCT SPECIFICATION

LCD Android Box

HD-3399F-BOX

Version: V1.2

Update History:

Version	Release time	Description
V1.2	Sep. 12, 2023	Updated product name.
V1.1	2023.8.30	First official release.

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Chapter Ⅰ Product description

Ⅰ. Overview

HD-3399F-BOX is a well-built all- in-one LCD display Android player, using Rockchip RK3399 (dual core cortex-A72 big core plus four quad-core Cortex-A53 little core) six core, 64-bit CPU, equipped with Android 10.0 solution. Frequency is up to 1.8GHz. Use Mail- T864 GPU, support 4K H.265 hard decode. Support IR remote, Wi-Fi, RJ45 and other rich interfaces to make the product more versatile. It is widely used in advertising, interactive all-in-one, security, medical, transportation, finance, industrial control and other intelligent control fields, which can accelerate product development cycle.

Due to its hardware platform and Android's intelligent characteristics, when it is necessary to perform human-computer interaction and network device interaction, it can be used on the smart terminal motherboard, which can become your best choice.

Ⅱ. Features

- High performance. The RK3399 chip use CPU equipped with Android 10.0 system, which is faster and more powerful. The main frequency can be as high as 1.8GHz. Compared with the common single-core, dual-core and quad-core solutions in the market, the performance have qualitative leap, capable of playing various formats of high-definition video screens, and capable of handling complex interactive operations.
- High stability. RK3399 Android integrated board, in hardware and software, add its own unique technology to ensure the stability of the product can make the final product 7 * 24 hours unattended.
- High integration. RK3399 Android integrated board integrates Ethernet, Wi-Fi, Power amplifier, USB expansion port, IR remote control function, HDMI, Microphone and other functions, greatly simplifying the overall design.
- High definition. Largest support 3840*2160 4K decode; support HDMI OUT and HDMI IN interfaces (optional TF expansion port) LCD screen and cropping screens of various sizes and resolutions.

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Chapter II Specifications

Ⅰ. Basic Parameters

1. Hardware Parameters

Hardware Specifications	
CPU	RK3399 highest 64 bit high performance CPU，Frequency up to 1.8 GHz； 1.Dual Cortex-A72 big-core + Quad Cortex-A53 little-core 64-bit CPU 2.Build in low energy consumption MCU Cortex-M0
GPU	Quad Cortex ARM Mali-T864 high performance GPU
RAM / Storage	Standard 2GB+32GB, 4GB+32GB, 4GB+64GB
Network	Adaptive 100M/1000M Ethernet; Support 2.4G/5G Wi-Fi, support Wi-Fi 802.11b/g/n protocol; Built-in WCDMA, EVDO, 4G full Netcom, support voice calls.
Image rotation	Support manual rotation of 0 degrees, 90 degrees, 180 degrees, 270 degrees
Display interface	1 HDMI interface, support 4K@60Hz video output;
Audio	Support standard left and right channel line output
RTC	Built-in real-time clock function
USB	1 way USB-3.0, 1 way USB/OTG (3.0) free switch
LED	1*power status LED (green), 1*system LED (green, blinking by default)
Button	1*Reset button
Power Adapter	Input: 100-240V/50-60Hz alternating current, output: 12V 1.5A direct current (Required surge voltage is less than 18V, ripple voltage is less than 100mV)
Storage Humid	10%～90％ RH
Storage Temp	-40℃~70℃
Work Temp	-20℃~70℃

2. Software Parameters

Software Specifications	
Operating system	Android 10.0
Audio	MP3,WMA,WAV, APE, FLAC, AAC, OGG,M4A,3GPP and other formats
Video	Support AVI（H.264、DIVX、DIVX、XVID）, rm，rmvb， MKV（H.264、DIVX、DIVX、XVID），WMV，MOV，MP4（.H.264、MPEG、DIVX、XVID），DAT（VCD format），VOB（DVD format），PMP,MPEG，.MPG,， FLV（H.263，H.264），ASF ，TS， TP，3GP，MPG etc. and other 30 kinds of formats
Image	Support various image 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
Input	Standard Android keyboard with optional third-party input method
System Management	Original ecological Android system, open root permissions, and can customize product development
	Real-time remote monitoring, system crash self-recovery, unattended 7 * 24 hours
	Support OTA remote upgrade; support U disk upgrade
	Support boot animation definition
	Support server / stand-alone mode switching
	Support Wi-Fi hotspot
System watchdog	Support software watchdog

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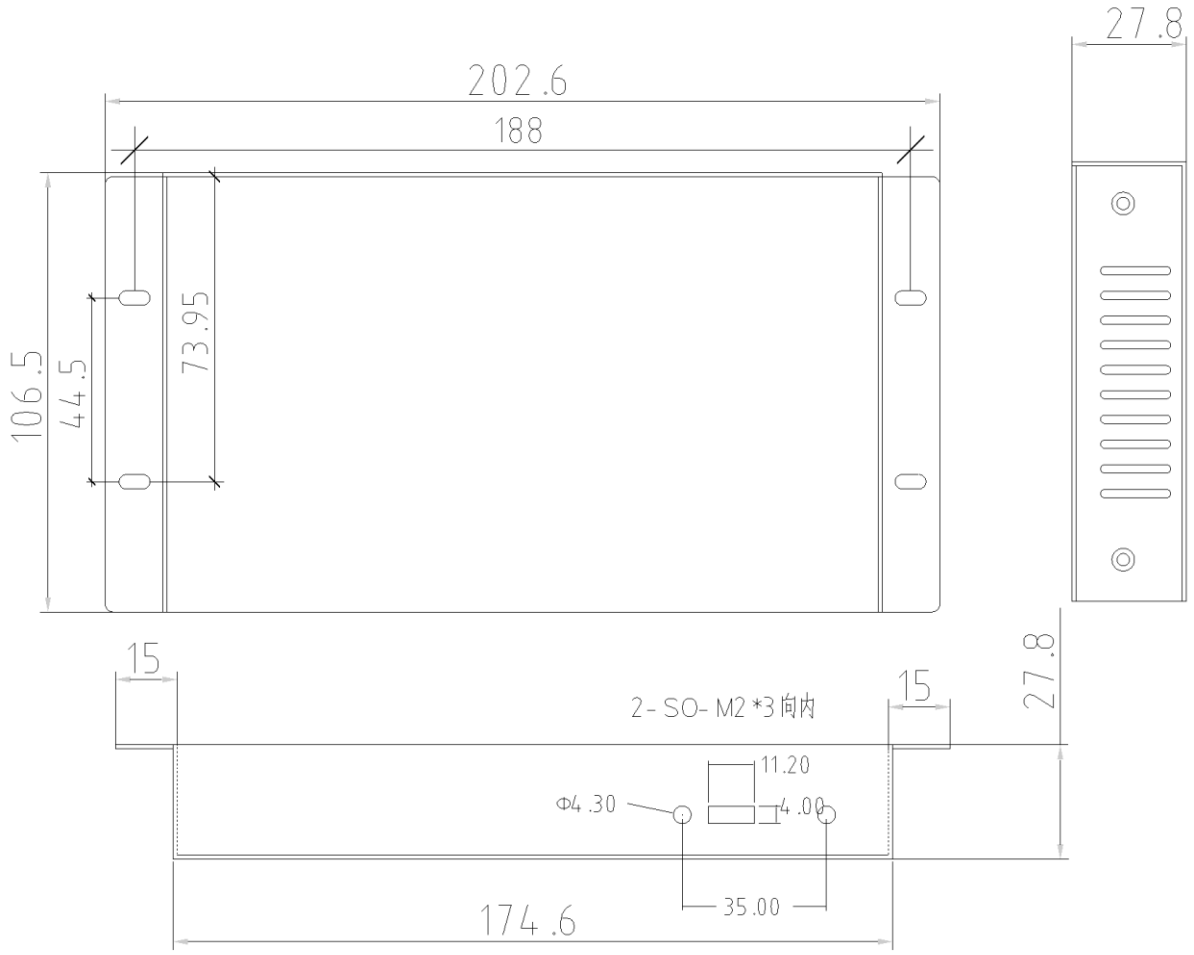
Ⅱ. Product Size Specifications

Side interface size (boxed)



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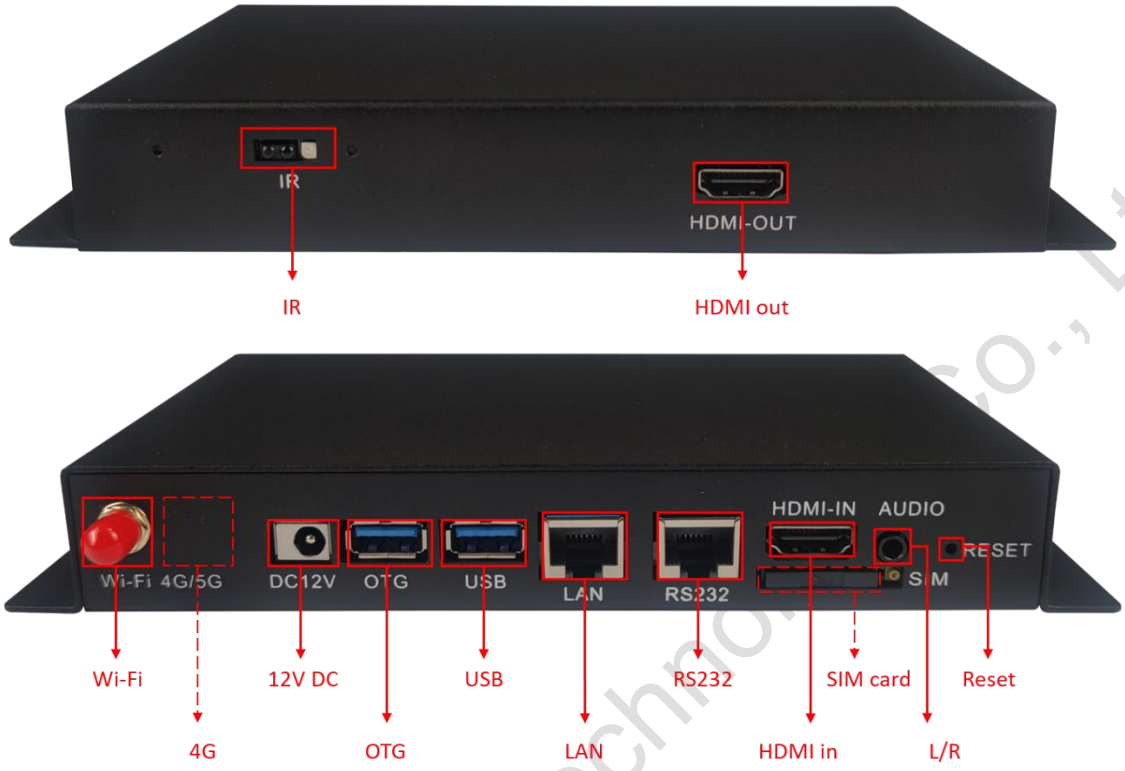
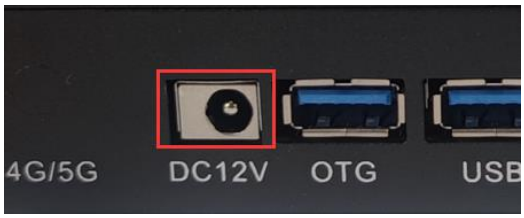
Ⅲ. Schematic diagram of product interface



Ⅳ. Interface Parameter Description

1. PWR/DC（power input）interface

The 12V DC power supply is used for power supply, and only the DC interface is allowed to power the play box.



Note: The inner diameter of the DC power port is 2.0mm, and the outer diameter is 5.8mm.

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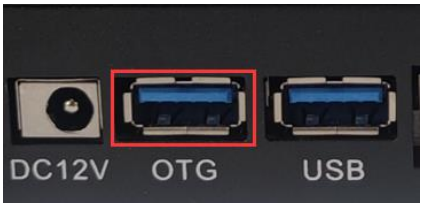
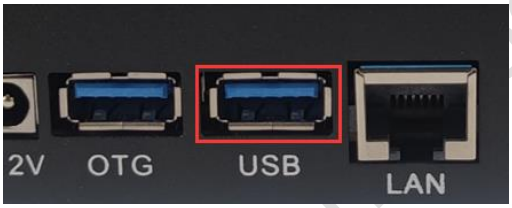
2. OTG interface

Used to upgrade firmware and other functions, in the system use the toolbox can be changed OTG/USB mode.



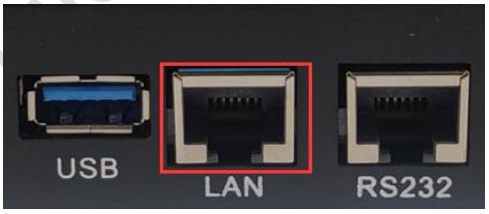
3. USB interface

Insert the U disk to update the program of the display screen.



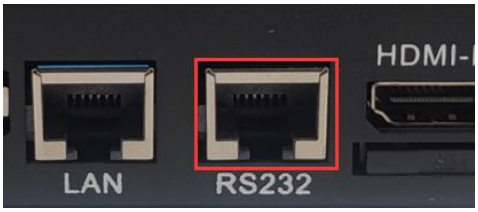
4. Network port

Connect to the Internet/LAN to realize remote Internet cluster management and LAN cluster management (LAN needs to be implemented through third-party software).



5. RS232 serial port

Used for debugging, communication, and docking with external devices.



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6. HDMI input interface

HDMI signal input, synchronous playback.

7. SIM card slot (Optional)

Install the 4G mobile phone card interface to realize remote cluster management after connecting to the Internet (non-standard interface, install the 4G module before leaving the factory according to user needs, and the user can prepare a 4G network card to access the Internet to achieve remote cluster control).

8. Audio port

Standard 3.5mm dual-channel audio interface, which can be directly connected to low-power speakers or power amplifiers.

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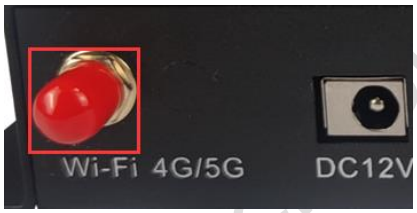
9. Reset interface

Reset pinhole, long press to restore factory settings.

10. Wi-Fi antenna interface

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



11. 4G antenna interface (Optional)

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

12. Infrared remote control receiver

Receiving remote control signals, debugging and program playback switching functions.

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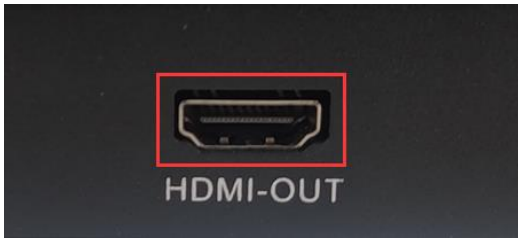
13. HDMI output interface

Connect to the LCD screen to display program.



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Chapter III Communication Methods

I. Update Programs by Wi-Fi

No Server required

Mobile APP management

II. Update Program with U-disk

U-disk update programs

Support Interstitial & memory expansion

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III. Update Program by TF Card

TF card update programs

Support Interstitial & memory expansion

IV. Update Programs with LAN

LAN or Internet

Network cable connection

LAN & Internet integrated management

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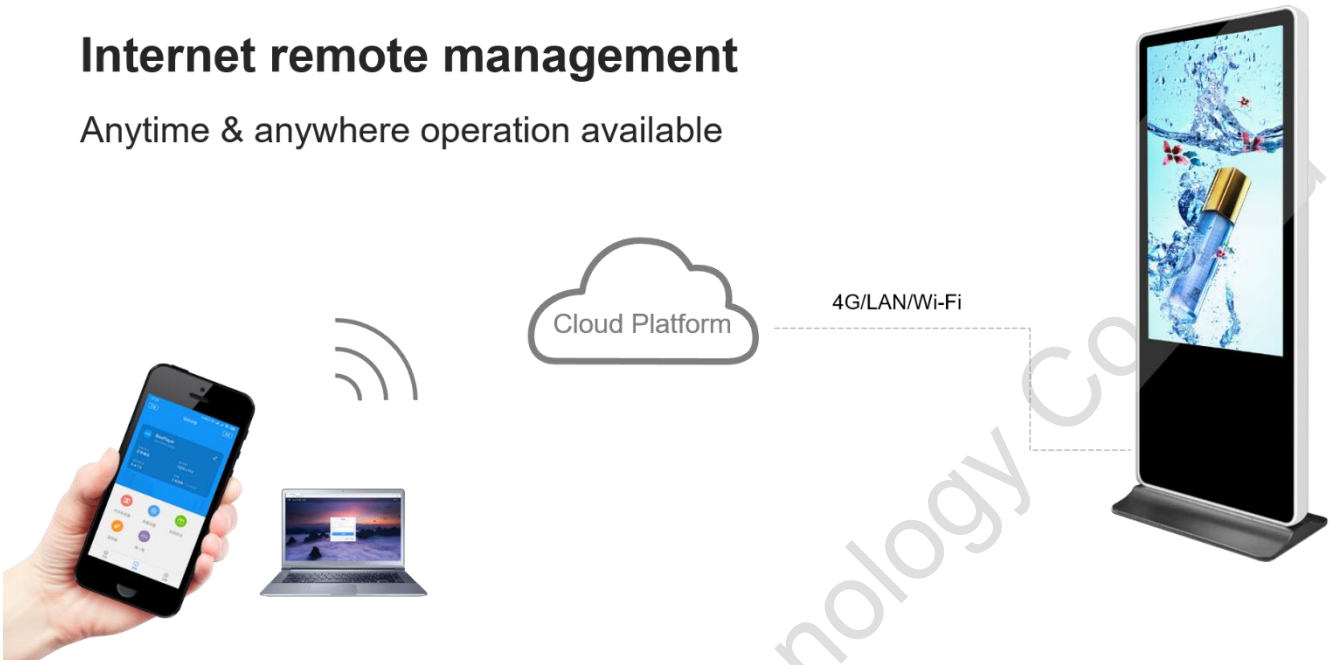
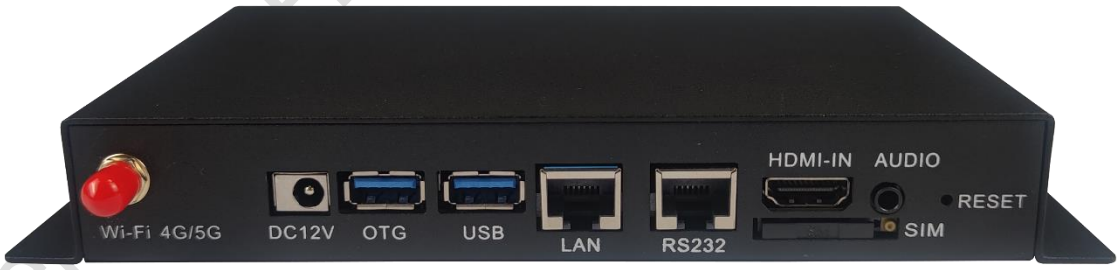
V. Update Programs by the Internet



Chapter IV Appendix: Product Appearance



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Special Note:

1. 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;

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