

PRODUCT SPECIFICATION

LCD Android Controller
HD-352C

Update History

Version	Release time	Description
V1.1	Mar. 28, 2025	Added description of program playback restrictions
V1.0	Air. 23, 2024	First official release.

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Chapter I Product Description

I. Overview

HD-352C is an Hi3751V352C quad-core chip solution, mains frequency up to 1.0 GHz, equipped with Android 10.0 system, and used Mali-450 MP2 GPU, with very strong video processing capabilities, compatible with most Video format and decoding capabilities.

It supports Wi-Fi, LAN, USB, IR and other rich expansion interfaces, making the product more versatile, and is widely used in advertising machines, interactive all-in-one machines, security, medical, transportation, finance, industrial control and other intelligent control fields.

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

- Minimalist design, reserved common interfaces, Mini size, can be used in ultra-thin application scenarios;
- High stability. Adds its own unique technology to the hardware and software to ensure the stability of the product, which can make the final product reach 7*24 hours unattended.
- High integration. Integrates Ethernet, Wi-Fi, TF expansion card, USB expansion port, IR remote control function, audio, LVDS, Backlight control, microphone and other functions.
- High scalability. 2*USB HOST interface (optional 1 channel USB-4G), 3*serial ports (1*UART, 1*DEBUG, 1*GPIO).
- High definition. It supports various LVDS interface's LCD displays, and supports various sizes and resolutions of cropped screens.
- Perfectly support multiple mainstream touch screen functions such as multi-point infrared touch, multi-point capacitive touch, multi-point Nano film touch, multi-point acoustic wave touch, multi-point optical touch, etc.

Chapter II Product Specifications

I . Basic Parameters

1. Hardware Parameters

Hardware Specifications	
CPU	Hi3751V352F, Quad-core, Dominant Frequency up to 1.0 GHz, Android10.0
GPU	Mali-450 MP2
RAM/ Storage	Standard 1GB+8GB, 1GB+32GB, 2GB+32GB
Network	100Mbps Ethernet; 2.4GHz Wi-Fi, support Wi-Fi 802.11b/g/n protocol; Supports external USB 4G communication module
Image rotation	Support 0 degree, 90 degree, 180 degree, 270 degree manual rotation
Display interface	1*LVDS interface (single/dual, 6-bit/8-bit), support 3.3V/5V/12V power supply Onboard backlight control supports 12V backlight power supply
Audio	Support standard left & right channel line output
Power amplifier	2 outputs (8 ohms, 5 watts dual audio amplifier output)
Touch screen	Support USB multi-point infrared touch, multi-point capacitive touch, multi-point nano film touch, multi-point sound wave Touch, multi-point optical touch and so on
RTC	Built-in real-time clock function
USB	2*USB-2.0 HOST (optional 1 channel USB-4G)
IR	Infrared receiver, support infrared remote control function
LED	1*power status LED(green),1*system LED(green blinking in default)
Serial port	1*UART(support optional 1*RS485), 1*DEBUG
Storage Humid	10% ~ 90% RH
Storage Temp	-40℃~70℃
Work Temp	-20℃~70℃

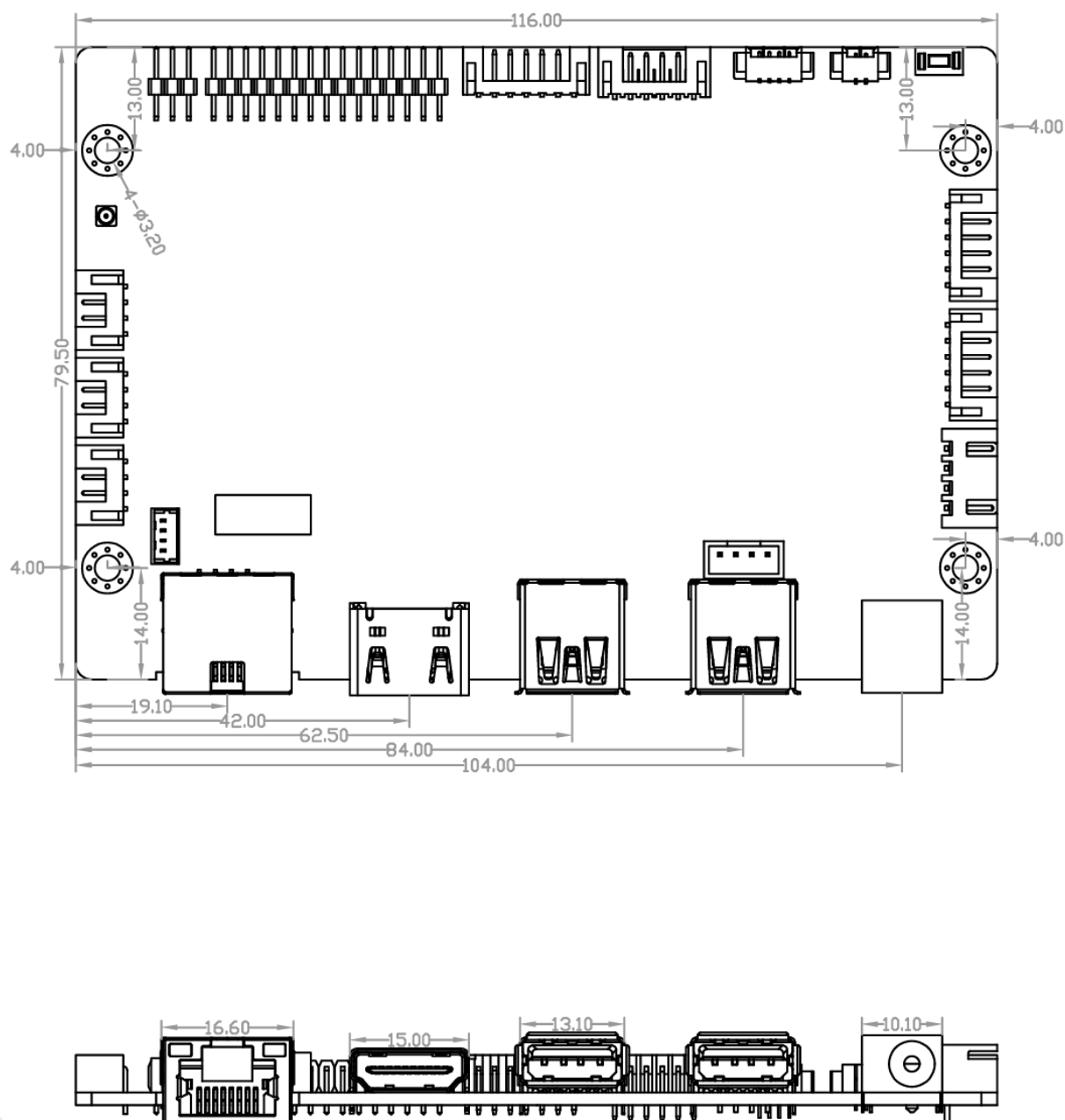
2. Software Parameters

Software Specifications	
Operation system	Android 10.0
Audio	MP3, WMA, WAV, APE, FLAC, AAC, OGG, M4A, 3GPP and other formats
Video	Support AVI, rm, rmvb, MKV, WMV, MOV, MP4, DAT, PMP, MPEG, MPG, FLV, ASF, TS, TP, 3GP, MPG and other formats. (Supports video playback in a single region only)
Image	Support JPG、BMP、PNG and various images formats
System default application software	Email, Calculator, Browser, Recorder, Calendar, Settings, Clock, Video Player, Search, Contacts, Gallery, Download, Camera, Music, Explorer, etc.
Language	Support multi-language
Input method	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

II. Dimension Diagram

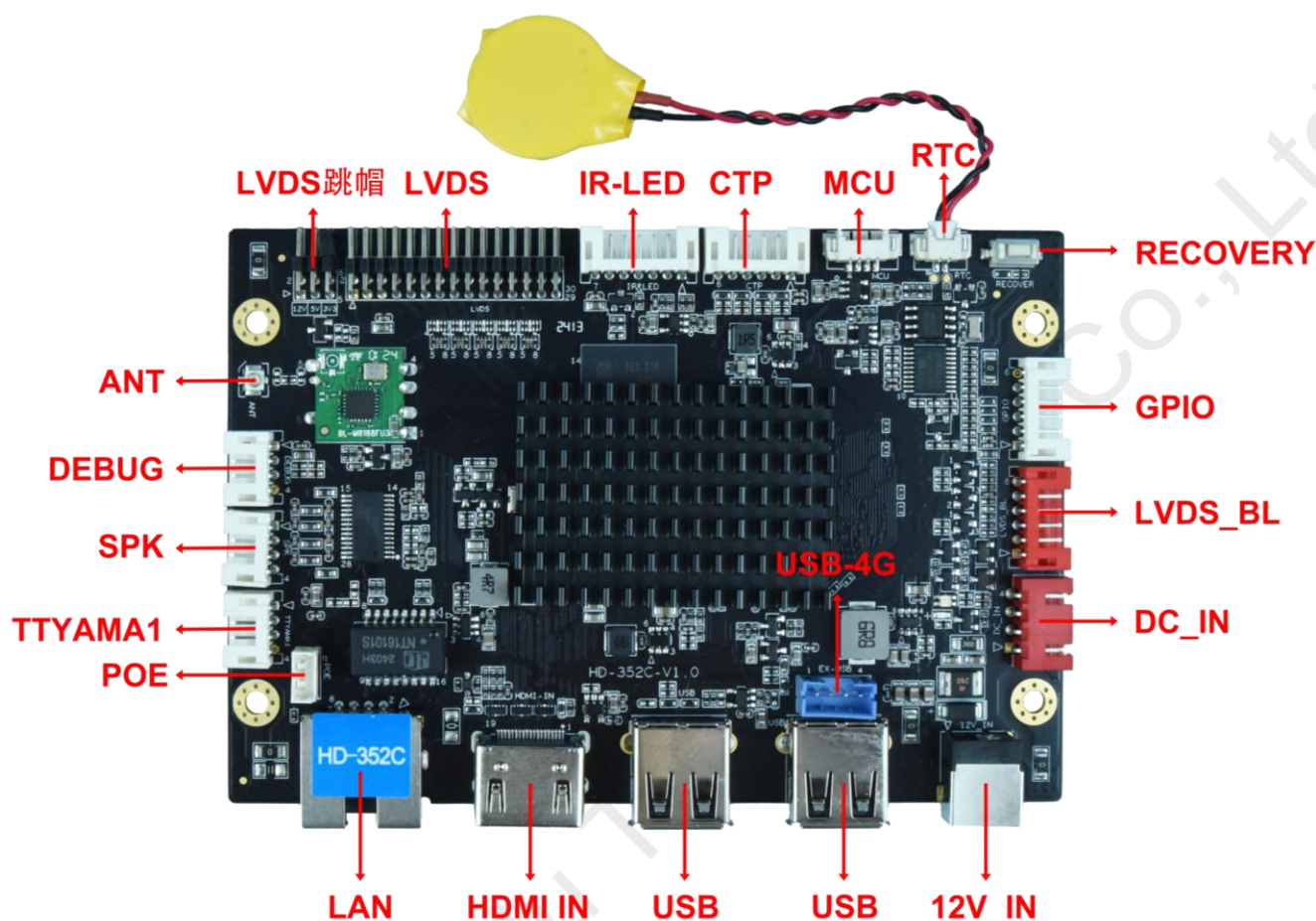
Bare board size specification

Unit: millimeter (mm); screw hole specification: $\phi 3.5\text{mm} \times 4$; PCB thickness: $1.6\text{mm} \pm 10\%$



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

III. Product Diagram

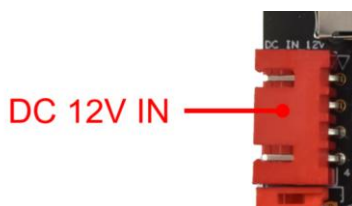


Note: The inner diameter of the DC power port is 2.0mm, and the outer diameter is 5.8mm.

IV. Interface Parameter Description

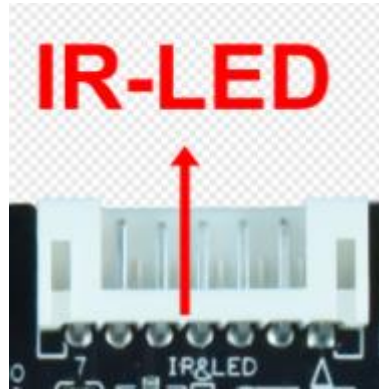
1. PWR/DC (Power input) Interface and Definition

It adopts 12V DC power supply and only allows the motherboard subsystem to be powered from the DC socket and power socket.



No.	Definition	Attribute	Description
4	12V	Input	12V Input
3	12V	Input	12V Input
2	GND	GND	GND
1	GND	GND	GND

2. IR-LED (Remote control) Interface and Definition



No.	Definition	Attribute	Description
1	RED	Output	Red indicator lamp
2	5V	Power	5V Output
3	GRN	Output	Green indicator lamp
4	IO	Output	Remote control signal Output
5	IR	Input	Remote control signal input
6	GND	GND	GND
7	5V	Power	3V3 Output

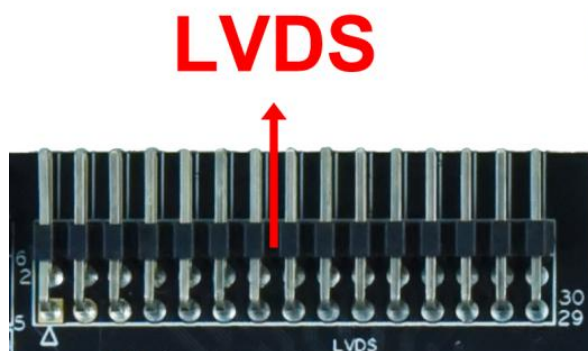
3. LVDS BL (LVDS backlight) Interface and Definition



No.	Definition	Attribute	Description
1	GND	GND	GND
2	GND	GND	GND
3	ADJ	Output	Backlight Brightness control
4	EN	Output	Backlight enable control

5	12V	Power	12V Output
6	12V	Power	12V Output

4. LVDS Interface and Definition



General LVDS interface definition, support single/dual, 6/8/10 bit 1080P LVDS screen. The screen voltage can be selected through the bridge-wire cap, and can choose to support 3.3V/5V/12V screen power supply.

In order to avoid burning the motherboards and screens, please pay attention to the following matters:

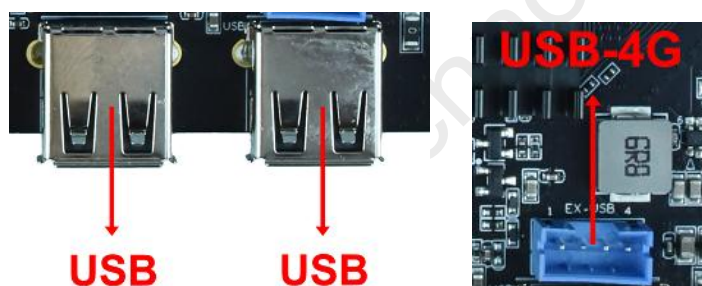
1. Please confirm whether the screen specification book screen supply voltage is correct, Whether the board's corresponding power supply can meet the maximum working current of the screen.
2. Please use a multimeter to confirm that the power supply selected by the jumper cap is correct.
3. When connecting the 6 / 8-bit LVDS screen cable, install it near pin 1.

No.	Definition	Attribute	Description
1	VCC	Power	3.3V/5V/12V optional output
2	VCC		
3	VCC		
4	GND	GND	GND
5	GND	GND	GND
6	GND	GND	GND
7	RX00-	Output	Odd 0-
8	RX00+	Output	Odd 0+
9	RX01-	Output	Odd 1-
10	RX01+	Output	Odd 1+
11	RX02-	Output	Odd 2-
12	RX02+	Output	Odd 2+
13	GND	GND	GND
14	GND	GND	GND
15	RXOC-	Output	Odd Clock-
16	RXOC+	Output	Odd Clock+
17	RX03-	Output	Odd 3-
18	RX03+	Output	Odd 3+

19	RXE0-	Output	Even 0-
20	RXE0+	Output	Even 0+
21	RXE1-	Output	Even 1-
22	RXE1+	Output	Even 1+
23	RXE2-	Output	Even 2-
24	RXE2+	Output	Even 2+
25	GND	GND	GND
26	GND	GND	GND
27	RXEC-	Output	Even Clock-
28	RXEC+	Output	Even Clock+
29	RXE3-	Output	Even 3-
30	RXE3+	Output	Even 3+

Note: Do not operate with power on, Do not hot swap.

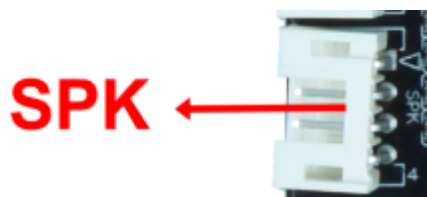
5. USB Interface and Definition



The motherboard has 2 USB standard interfaces and 3 USB pin

No.	Definition	Attribute	Description
1	5V	Power	5V Output
2	DM	Input/ Output	DM
3	DP	Input/output	DP
4	GND	GND	GND

6. SPK (Audio) Interface and Definition



No.	Definition	Attribute	Description
1	OUTP-R	Output	Right channel +
2	OUTN-R	Output	Right channel -
3	OUTN-L	Output	Left channel -
4	OUTP-L	Output	Left channel +

7. TTYAMA1 Interface and Definition



The motherboard leads to one set of common UART serial ports, which can support common UART serial devices on the market.

Matters need attention:

1. Whether the serial port voltage matches. Cannot directly connect to RS485 devices.
2. Whether the TX and RX connections are correct.
3. Unsupported RS232.

No.	Definition	Attribute	Description
1	3V3	Power supply	3.3V Output
2	TX/485A	Output	TX/485A
3	RX/485B	Input	RX/485B
4	GND	Ground wire	Ground wire

8. DEBUG Interface and Definition



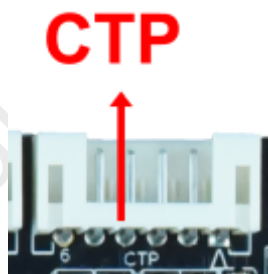
No.	Definition	Attribute	Description
1	3V3	Power	3.3V Output
2	TX	Output	TX
3	RX	Input	RX
4	GND	GND	GND

9. GPIO Interface and Definition



No.	Definition	Attributes	Description
1	3V3	Power supply	3.3V output
2	IO5	IO5	IO5
3	IO4	IO4	IO4
4	IO3	IO3	IO3
5	IO1	IO1	IO1
6	GND	GND	GND

10. CTP Interface and Definition



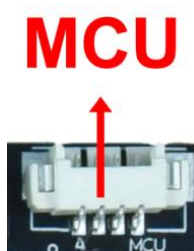
NO.	Definition	Attributes	Description
1	3V3	Power supply	3.3V output
2	SCL	Input / Output	I2C clock
3	SDA	Input / Output	I2C data
4	INT	Input / Output	to interrupt
5	RST	Input / Output	reset
6	GND	Ground wire	Ground wire

11. POE Interface and Definition



NO.	Definition	Attributes	Description
1	V1	CT1	Transformer Center 1
2	V2	CT2	Transformer Center 2
3	B1	VB1	Transformer Center 3
4	B2	VB2	Transformer Center 4

12. MCU 接口



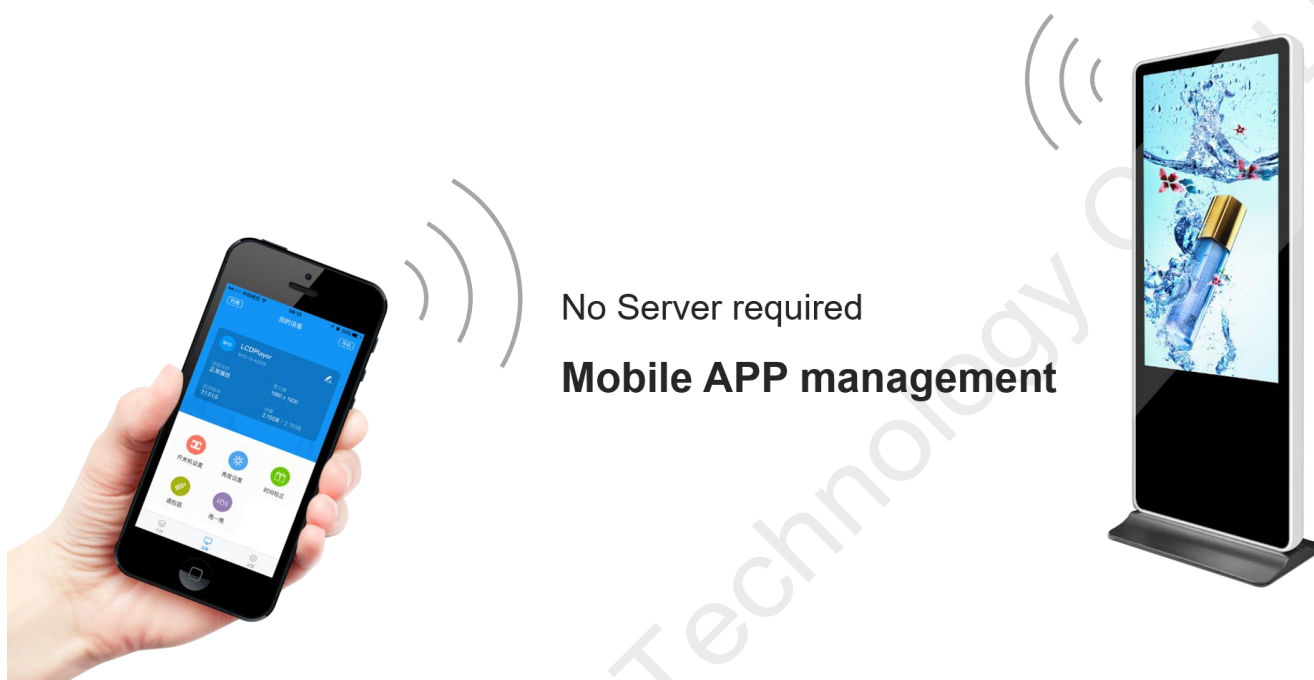
NO.	Definition	Attributes	Description
1	GND	Ground wire	Ground wire
2	CLK	Input	CLK
3	DIO	Output	DIO
4	3V3	Power supply	3.3V Output

13. Other Interface

Storage interface	USB	HOST interface, support data storage, data import, USB mouse keyboard, camera, touch screen, etc.
Ethernet interface	RJ45 interface	Support 100M wired network

Chapter III Communication Methods

I . Wi-Fi Update Program

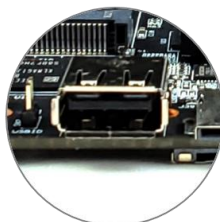


II. U-disk Update Program



U-disk update programs

Support Interstitial & memory expansion

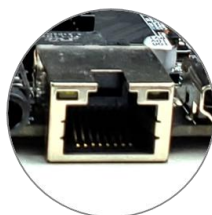


III. TF card Update Program

LAN or Internet

Network cable connection

LAN & Internet integrated management



IV. Internet Update

Internet remote management

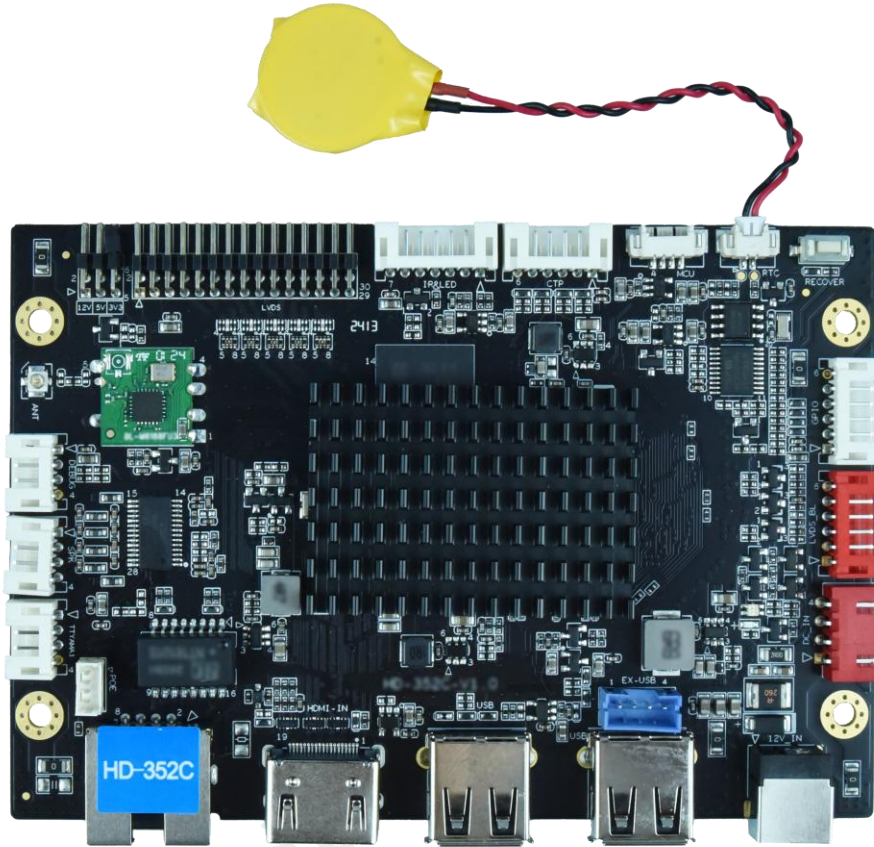
Anytime & anywhere operation available

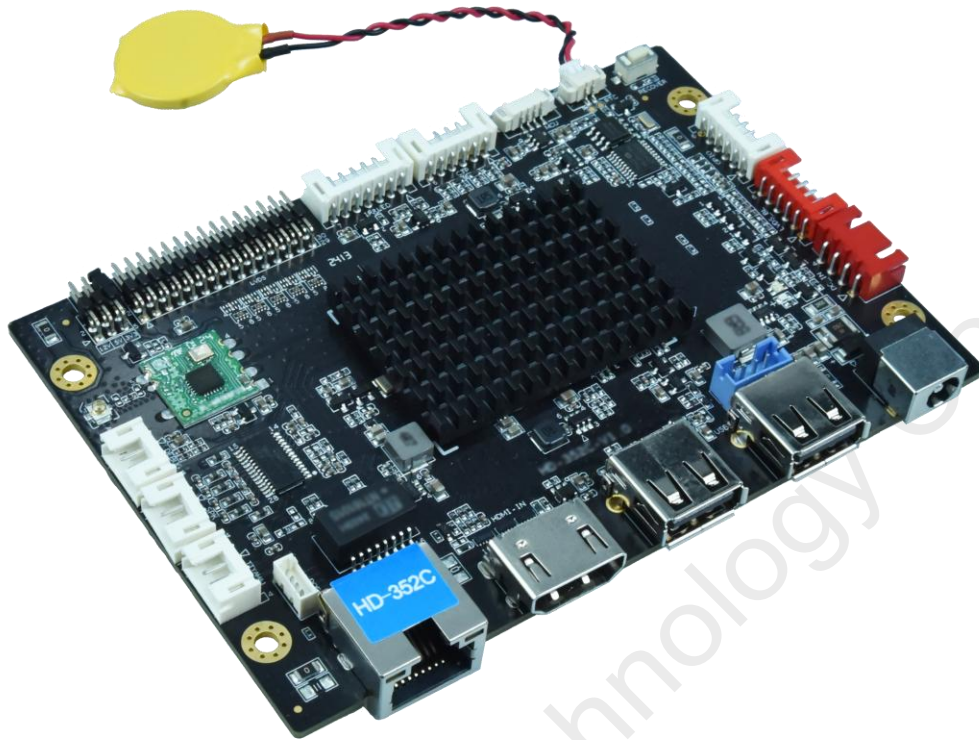


LAN/Wi-Fi



Chapter IV Appendix: Product Appearance





Note:

1. Paste the corresponding model label on the sales product. Some difference between the product picture in the specification and the actual product, not a fake or inferior product. If you have any questions, please contact HUIDU Technology for confirmation.
2. **Do not operate with power on, Do not hot swap.**