
RK7123H-Technical Specification

Contents

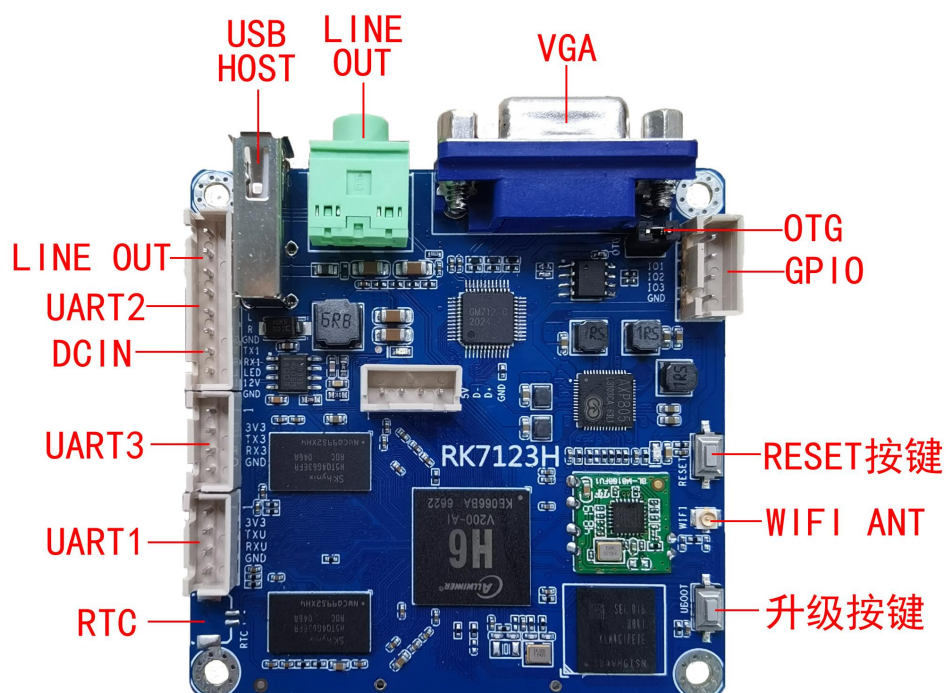
1.Parameter List.....	1
2.Hardware Interfaces	错误！未定义书签。
2.1 Appearance	3
2.2 Power Interfaces	4
2.3 TTL UART	4
2.4 LINE OUT	5
2.5 USB HOST	5
2.6 GPIO (Optional)	6
2.7 RTC (Optional)	7
3.Dimension drawing	7

1.Parameter List

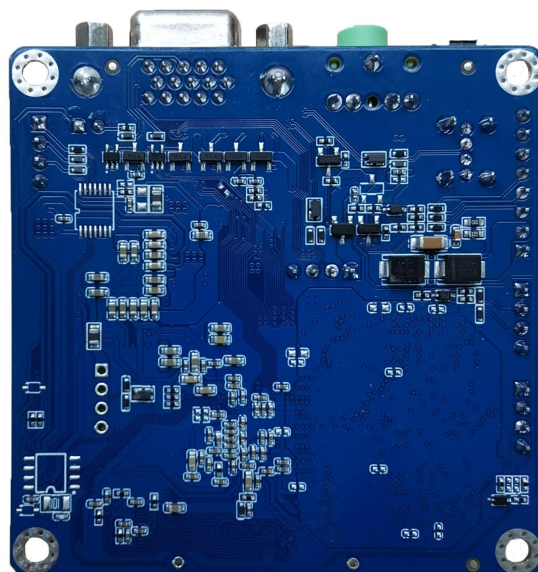
Motherboard Solutions	
Model Description	RK7123H Standard type(DDR1G+EMMC8G) RK7123H-W Standard type and WIFI Note: This product also supports 4G function, such as the need to practice customer service to ask the detailed configuration and the corresponding price
CPU	Quad-core ARM Cortex A53, 64-bit architecture
GPU	High-performance multi-core GPU Mali-T720
Memory	DDR3 Standard 1GB
Local Storage	EMMC Flash Standard 4GB
Supported Operating Systems	Android
Multimedia	Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps 1080P multi-format video decoding (WMV, MPEG-1/2/4, VP8) 1080P video encoding, support H.264, VP8 format
WIFI	WIFI 802.11 a/b/g/n(Optional)
USB	USB2.0 HOST*3, OTG*1
Headphones	x1
LINE OUT	x1
VGA	x1
UART	UART TTL *3
RTC	External battery (optional)
GPIO	X3 (optional)
Power	12V
Operating temperature	-30-75℃
Product Size	70x70mm

2 .Hardware interface

2.1 Appearance



Front view



Back view

2.2 Power connector

Connects via an 8PIN 2.54mm pitch white socket.



Pin	name	Remark
1	GND	GND
2	12V	12V Input(8-24V)
3	LED	Indicator light
4	RX2	UART2 TTL
5	TX2	UART2 TTL
6	GND	GND
7	R	LINE OUT_R
8	L	LINE OUT_L

2.3 TTL UART

There are three TTL serial ports.

- One of the UART2 connectors is on the 8pin power socket.
- UART3 and UART1 are connected via two 4PIN 2.54mm pitch white sockets.



Pin	name	Pin	name
1	3V3	2	TX
3	RX	4	GND

Note:

The UART2 serial communication signal corresponds to /dev/ttyS2.

UART3 serial communication signal corresponds to /dev/ttyS3.

UART1 serial communication signal corresponds to /dev/ttyS1.

2.4 LINE OUT

There are two LINE OUT channels.

- One of the LINE OUT_R/L connectors is on the 8pin power socket.
- The other way LINE OUT is connected with the headphone jack.



2.5 USB HOST

- There are USBx 1 channels.
- One of the USB HOSTs is multiplexed with OTG and connected via an upright USB holder.



- Jumper cap shorting, for OTG.



- Jumper caps are not shorted to do USB HOST.

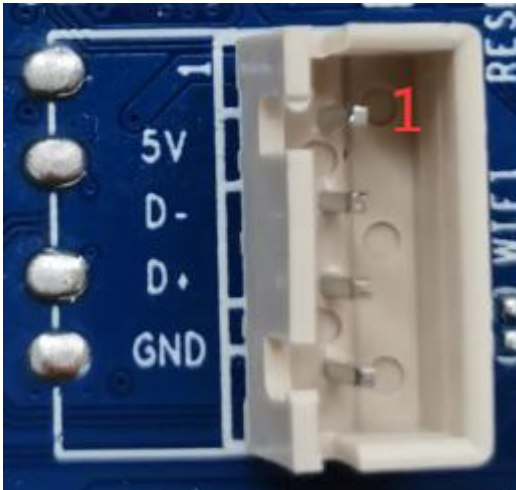


- The other 2 USB HOSTs are connected via 2 x 4 PIN 2.54mm pitch white sockets.



Pin	name	Pin	name
1	5V	2	D-
3	D+	4	GND

- One of them is multiplexed with the WIFI function, and this USB port cannot be used when using the WIFI function.



2.6 GPIO (Optional)

The GPIO interface is connected via a 4PIN 2.54mm pitch white socket.

Pin	name	Pin	name
1	IO1	2	IO2
3	IO3	4	GND



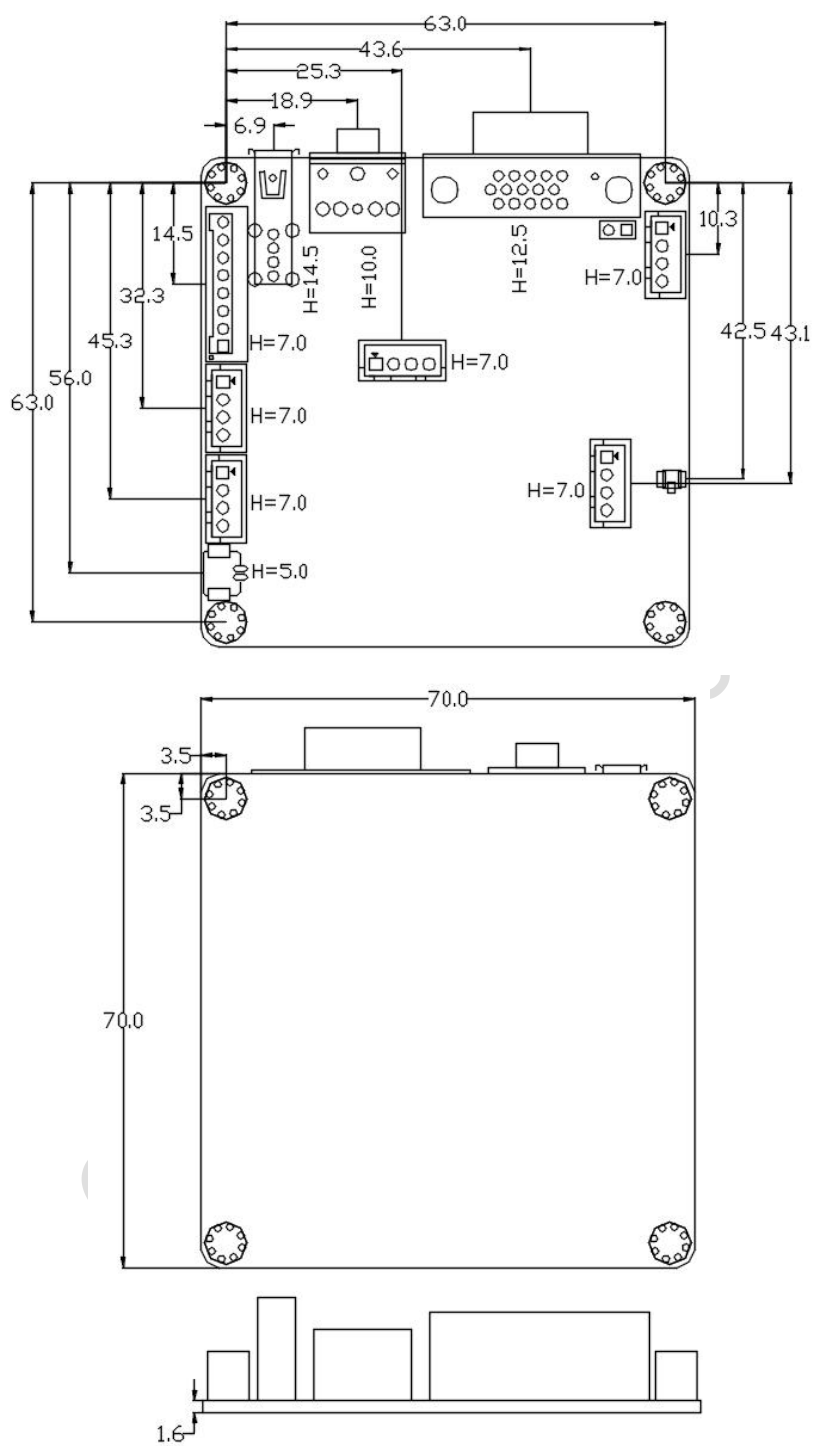
2.7 RTC (Optional)

The RTC interface is connected via a 2PIN 1.25mm pitch vertical chip socket, which can be externally connected to a CR2032 battery.



Pin	Description
1	RTC-
2	RTC+

3.Dimension drawing



1. 尺寸定位基准为定位孔。
2. 未标注公差为 $\pm 0.3\text{mm}$ 。