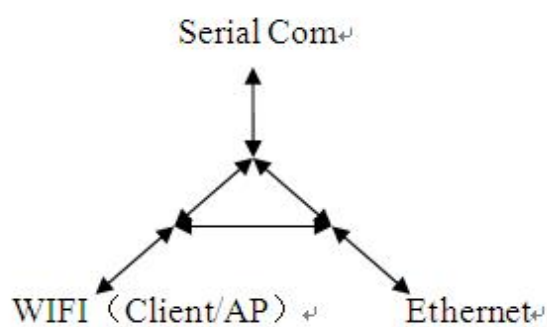**Product Details**

HLK-RM04 is a new low-cost embedded UART-ETH-WIFI module (serial port - Ethernet - Wireless network). This product is an embedded module based on the universal serial interface network standard, built-in TCP / IP protocol stack, enabling the user serial port, Ethernet, wireless network (wifi) interface between the conversions.

Through the HLK-RM04 module, the traditional serial devices do not need to change any configuration; data can be transmitted through the Internet network. Provide a quick solution for the user's serial devices to transfer data via Ethernet.

FCC ID:ZXVHLK-RM04   FCC Certificate   CE certificate check

1   Summarize

1.1   Technical Specifications
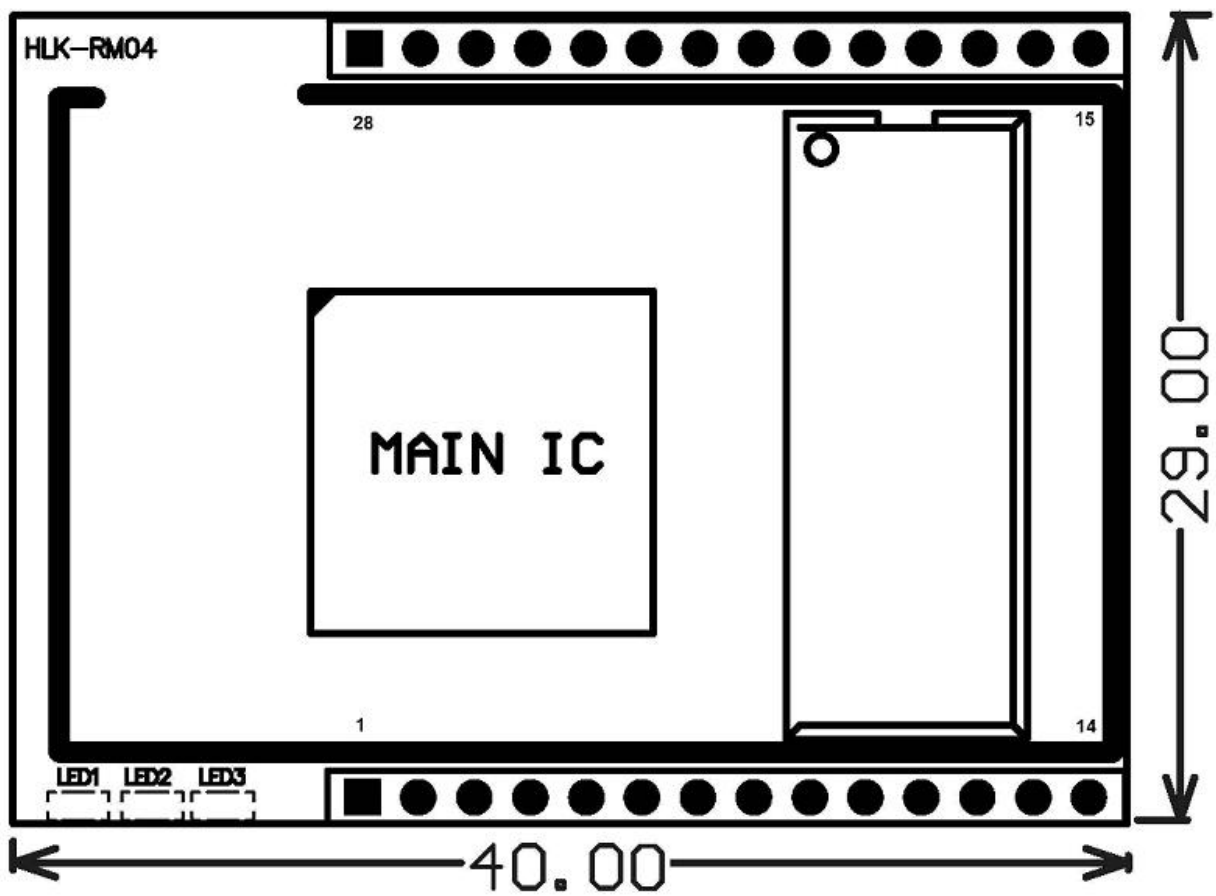
Table2-1Technical Specifications

Network standard	wireless：IEEE 802.11n、IEEE 802.11g、IEEE 802.11b
	wired：IEEE 802.3、IEEE 802.3u
Wireless transmission rate	11n: maximum up to 150Mbps
	11g: maximum up to 54Mbps
	11b: maximum up to 11Mbps
Tracks number	1-14
Frequency range	2.4-2.4835G
Emission power	12-15DBM
Interface	1 个 10/100Mbps LAN/WAN multiplex interface、interface
Antenna	
Antenna type	Onboard antenna / External Antenna
Functional Parameters	
WIFI work mode	Client/AP/Router
WDS Function	Support WDS wireless bridge connection
Wireless security	Wireless MAC address filtering
	Wireless security function switch
	64/128/152 bit WEP encryption
	WPA-PSK/WPA2-PSK、WPA/WPA2 security mechanism
Network management	Remote Web management
	Configuration file import and export
	WEB software upgrade
Serial to Network	
Maximum transmission rate	230400bps
TCP connection	Max connection number>20
UDP connection	Max connection number>20
Serial baud rate	50~230400bps
Other Parameters	
Status indicator	Status indicator
Environmental standard	Operating temperature：-20-70℃
	Operating humidity：10%-90%RH
	Storage temperature：-40-80℃
	Storage humidity：5%-90%RH

Additional properties	Frequency bandwidth optional：20MHz、40MHz

1.2 Hardware Explanation

1.2.1 Mechanical Dimensions

HLK-RM04 Mechanical Dimensions is shown in the following picture：

1.2.1.1 Contact Pin Interface

The Pin of this product as shown above is defined as follows：

Table2-2 module pin interface

No.	Function	Direction	Explanation
1	VDD5V	A	5 Power input
2	GND	GND	Power ground
3	WLAN_LED	O	WIFI LED

4	3.3V	I	3.3V power output
5	LINK1	I/O	Net gape 1 LED indicte
6	USB_P		USB signal D-
7	USB_M		USB signal D+
8	I2S_SD		I2C DATA/GPIO
9	I2S_CLK		I2C CLK/GPIO
10	GIOP0	I/O	Universal GPIO
11	TXOP1	I/O	Net gape 1 TX-P
12	TXON1	I/O	Net gape 1 TX-N
13	RXIP2	I/O	Net gape 2 RX-P
14	RXIN2	I/O	Net gape 2 RX-N
15	RXIN1	I/O	Net gape 1 RX-P
16	RXIP1	I/O	Net gape 1 RX-P
17	TXON2	I/O	Net gape 2 TX-N
18	TXOP2	I/O	Net gape 2 TX-P
19	RTS_N	I	All function serial RTS
20	UART_RX	I	Simple serial RX
21	UART_TX	O	Simple serial TX
22	RXD	I	All function serial RX
23	LINK2	I/O	Net gape 2 LED I/O indicte
24	CTS_N	O	All function serial CTS
25	RIN	I	GPIO
26	TXD	O	All function serial TX
27	1.8V	Power Out	Net gape 1.8V output
28	VDD5V	Power In	5V input