Shenzhen Hi-Link Electronic co., Ltd

HLK-RM04 User Manual
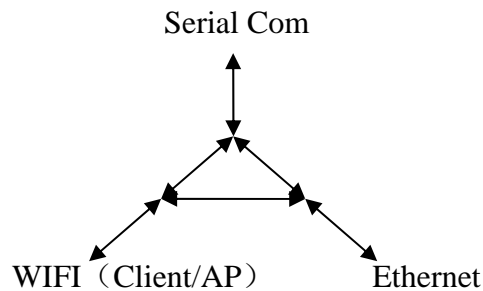
ETHERNET

WIFI

Full Function Serial Network/Wireless Module

1   Brief Introduction

HLK-RM04 is a new low-cost embedded UART-ETH-WIFI module (serial port - Ethernet - Wireless network) developed by Shenzhen Hi-Link Electronic co., Ltd

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.

Serial Com

WIFI（Client/AP）   Ethernet

Picture1.F-structure

2   Summarize

2.1   Technical Specifications
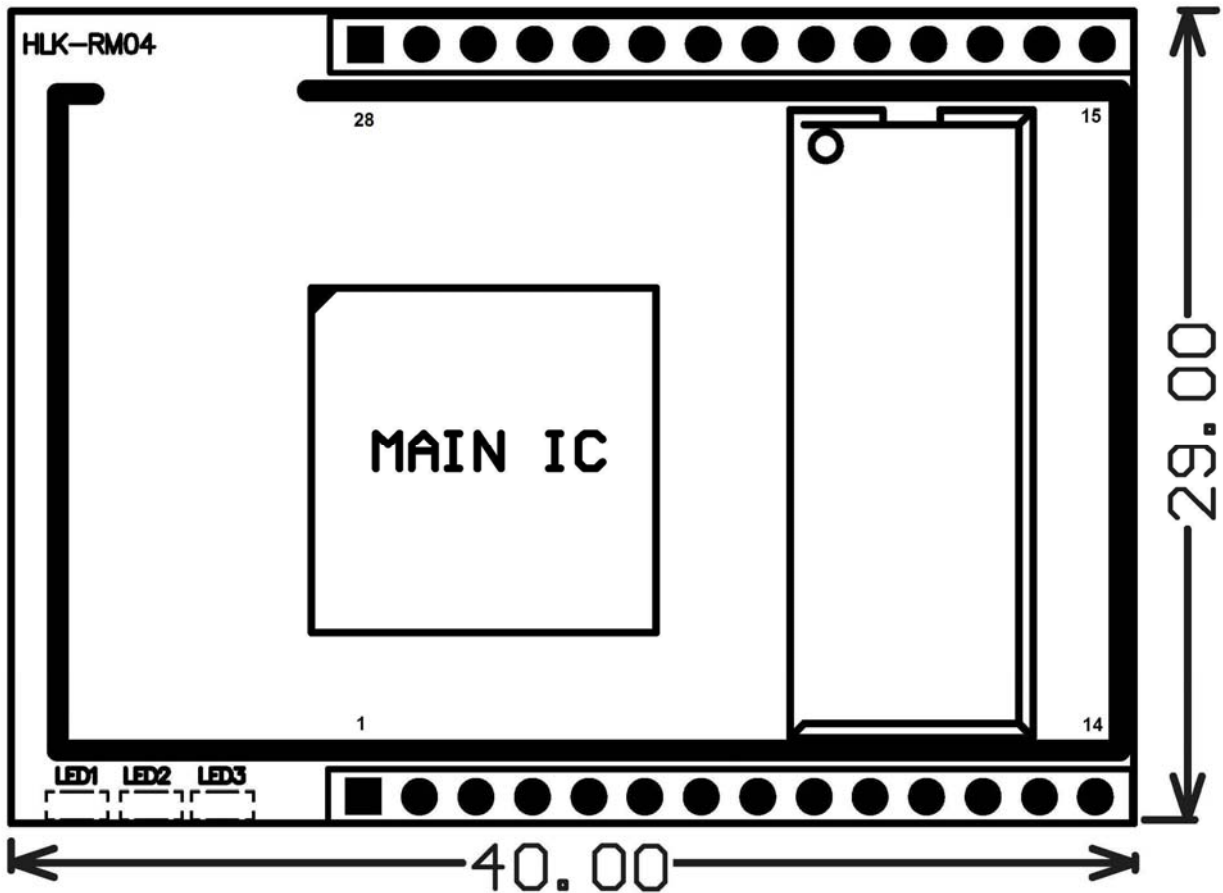
Table2-1Technical Specifications

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	1-11
Frequency range	2.412-2.462G
Emission power	<16dBm
Antenna	
Antenna type	Integral 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，

2.2 Hardware Explanation

2.2.1 Mechanical Dimensions

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

Picture2.Dimensions Unit:mm

2.2.1.1 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

Regulatory Information

The devices must be installed and used in strict accordance with the instructions as described in the user documentation that comes with the product.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module.
This exterior label can use wording such as the following:
"Contains Transmitter Module FCC ID: ZXVHLK-RM04"

When the module is installed inside another device, the user manual of this device must contain below warning statements:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This modular could be installed in the fix or mobile devices only, installed in the portable device, like USB dongle is forbidden. This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

For manufacturer:
The end product into which the module will be installed should be the fix or mobile devices only, the portable device, like USB dongle is forbidden.
The end product into which the module will be installed should be installed and operated with a minimum distance of 20 cm between the radiator and user body.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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