# UART WiFi Module


**serial wifi module RM08M**

## DETAILS

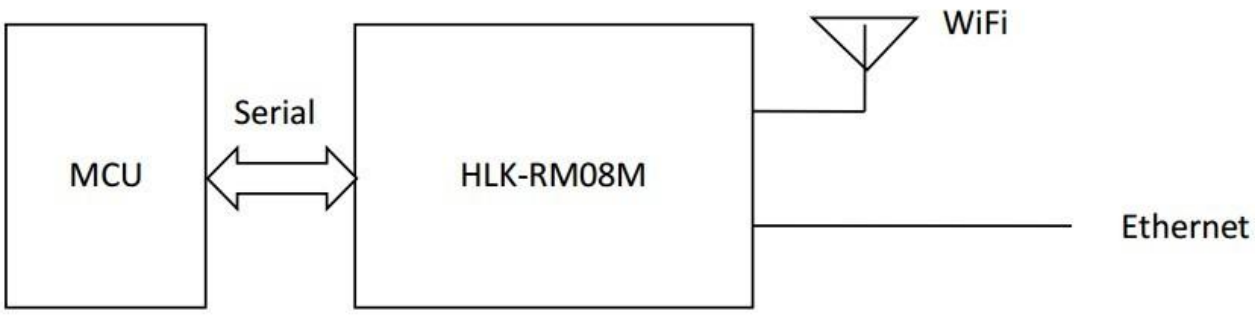
**1. BRIEF INTRODUCTION**

**HLK-RM08M is a new low-cost embedded UART-ETH-WIFI module (serial port - Ethernet - Wireless network) developed by Shenzhen Hi-Link (HK) co., Ltd.**

**The product is a low power consumption WIFI module,supports EEE802.11b/g/n wireless protocol with small size and smart use,fully transparent transmission UART module, built-in TCP / IP protocol stack, enabling users short development cycle. It just needs host computer,WEB browser or APP to set up parameters, making the connection between UART and network.**

**HLK-RM08M has stable performance and flexible use, meeting kinds of requirements of users. and strong technical supports could be provided. Also, it could be customized,such as WEB interface ,mobile phone app and so on.**

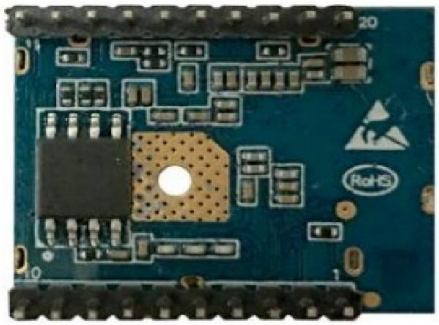
**Diagram 1. Function structure**



## 2. HARDWARE EXPLANATION

### 2.1 Mechanical Dimensions


Top view




Bottom view

Note：pitch of holes 2.0mm, pitch of holes 0.7mm.

Dimensions：25mm(length） X 20mm(width ) X 2mm(height)

### 2.2 Pin Definitions

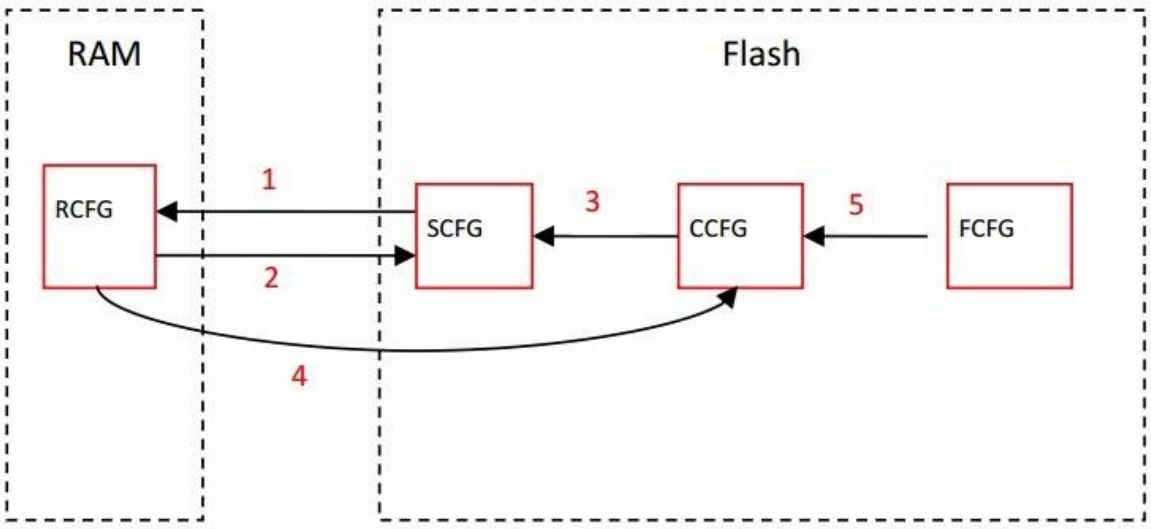
| NO. | FUNCTION | DIRECTION | DESCRIPTION |
|---|---|---|---|
| 1 | LINK0 | 0 | NET port 0 Connection status indicator |
| 2 | RXIP0 | A | NET port 0 RX—P |
| 3 | RXIN0 | A | NET port 0 RX—N |
| 4 | TXOP0 | A | NET port 0 TX—P |
| 5 | TXON0 | A | NET port 0 TX—N |
| 6 | LINK1 | A | NET port 1Connection status indicator |
| 7 | RXIP1 | A | NET port 1 RX—P |
| 8 | RXIN1 | A | NET port 1 RX—N |
| 9 | TXOP1 | A | NET port 1 TX—P |
| 10 | TXON1 | A | NET port 1 TX—N |

| | | | |
|---|---|---|---|
| 11 | RES6 | - | UART port 0 EXIT transparent transmission |
| 12 | UART_TX0 | O | UART port 0 TX |
| 13 | UART_RX0 | I | UART port 0 RX |
| 14 | RST | - | Reset （short press） |
| 15 | WPS | - | Factory reset (serial port 1 exit transparent transmission ) |
| 16 | UART_TX1 | O | UART port 1 TX |
| 17 | UART_RX1 | I | UART port 1RX |
| 18 | WIFI_LED | O | WIFI activate indication （activate low） |
| 19 | GND | Power | GND |
| 20 | VCC | POWER | 3.3V INPUT |

ES6、RST、WPS Function Introductions ：

1. After System boot, ES6 keep the lower level time 0.05s<t<6s, Serial 0 exit transparent transmission.
2. After system boot, RST keep low level time 1s, reset.
3. Power on, WPS is low level, keep the time of 0.05s<t<6s, UART 1 EXIT transparent transmission. (lower level time 6s<t<12s,factory reset )

**Parameter storage**



RCFG：The parameters in the memory.
SCFG：General parameters.
CCFG：Save To C Instructions to save parameters.
FCFG：Factory factory Settings. Users can't modify.

1. Power on, module read SCFG to RCFG from flash.
2. Save instructions RCFG to SCFG.
3. Restore settings, copy CCFG to SCFG.
4. Save To C Save instructions RCFG to CCFG.
5. Factory resetting, copy FCFG to CCFG.