# HEKR V1.1 Wi-Fi模块参考电路图

GND

C1 6.2pF 10V/0402  X1  C2 6.2pF 10V/0402

FA-20H 26M-10ppm/EPSON/2520

R1 12K 1%/0402

3V3

R2 12K 1%/0402  RST

3V3

Antenna1

天线阻抗匹配需根据实际板材进行匹配

C3 0R/0402

GND

C8 0.5pF/0402  C9 0.5pF/0402

GND  GND

U1 ESP8266/QFN32

| | | |
|---|---|---|
| 1 | VDDA | |
| 2 | LNA | |
| 3 | VDD3P3 | |
| 4 | VDD3P3 | |
| 5 | VDD_RTC | |
| 6 | TOUT | |
| 7 | CHIP_EN | |
| 8 | XPD_DCDC | |

ESP8266

3V3

3V3

GPIO5 24 GPIO5
SD_DATA_1 23 SD_DATA_1
SD_DATA_0 22 SD_DATA_0
SD_CLK 21 SD_CLK
SD_CMD 20 SD_CMD
SD_DATA_3 19 SD_DATA_3
SD_DATA_2 18 SD_DATA_2
VDDPST 17 3V3

C6 4.7uF 10V/0402

GND

U0_TXD
U0_RXD

GND_PAD 33
EXT_RSTB 32
RES12K 31
VDDA 30
VDDD 29
XTAL_OUT 28
XTAL_IN 27
U0TXD 26
U0RXD 25

MTMS 9
MTDI 10
VDDPST 11
MTCK 12
MTDO 13
GPIO2 14
GPIO0 15
GPIO4 16

3V3

GPIO4
GPIO0
GPIO2
GPIO15
GPIO13
GPIO12
GPIO14
CH_PD
ADC

ESP8266

## 接口定义

P3

| | | |
|---|---|---|
| U0_TXD | 1 | 1 |
| U0_RXD | 3 | 2 |
| GPIO13 | 13 | 3 |
| GPIO14 | 14 | 4 |
| GND | | 5 |
| 3V3 | | 6 |
| RST | | 7 |

Header 7

## 芯片启动配置

3V3  R4 12K 1%/0402  CH_PD
GPIO15  R6 12K/0402  GPIO2
GND
3V3  R3 12K/0402  GPIO2
3V3  R5 12K/0402  GPIO0

## 2MB SPI Flash

U2

| | | | | |
|---|---|---|---|---|
| SD_CMD | 1 | /CS | VCC | 8 |
| SD_DATA_0 | 2 | DO | /HOLD | 7 SD_DATA_2 |
| SD_DATA_3 | 3 | /WP | CLK | 6 SD_CLK |
| | 4 | GND | DI | 5 SD_DATA_1 |

GD25Q16CSIG/SOP8

GND

3V3

C4 22uF 10V/0805  C5 100nF 10V/0402

GND  GND

## wifi状态指示灯

GPIO4

LED1 RED_0402

R9 12K/0402

GND

| Pin | Name | Function | Pin | Name | Function | Pin | Name | Function |
|---|---|---|---|---|---|---|---|---|
| 1 | VDDA | 模拟电源3.0~3.3V | 12 | MTCK | GPIO13，HSPID | 23 | SDIO_DATA1 | GPIO8，SD_MOSI |
| 2 | LNA | 射频天线接口 | 13 | MTDO | GPIO15，HSPICS | 24 | GPIO5 | GPIO5 |
| 3 | VDD3P3 | PA电源3.3V | 14 | GPIO2 | GPIO2 | 25 | U0RXD | GPIO3， |
| 4 | VDD3P3 | PA电源3.3V | 15 | GPIO0 | GPIO0，SPICS2 | 26 | U0TXD | GPIO1，SPICS1 |
| 5 | VDD_RTC | NC/1.1V | 16 | GPIO4 | GPIO4 | 27 | XTAL_OUT | 晶振输出 |
| 6 | TOUT | ADC输入引脚 | 17 | VDDPST | 数字和IO电源1.8~3.3V | 28 | XTAL_IN | 晶振输入 |
| 7 | CHEP_EN | 芯片使能引脚：高电平使能芯片 | 18 | SDIO_DATA2 | GPIO9，SD_2 | 29 | VDDD | 数字电源3.0~3.3V |
| 8 | XPD_DCDC | sleep唤醒，GPIO16 | 19 | SDIO_DATA3 | GPIO10，SD_3 | 30 | VDDA | 模拟电源3.0~3.3V |
| 9 | MTMS | GPIO14，HSPICLK | 20 | SDIO_CMD | GPIO11，SD_CS | 31 | RES12K | 串联12K电阻到地 |
| 10 | MTDI | GPIO12，HSPIQ | 21 | SDIO_CLK | GPIO6，SD_CLK | 32 | EXT_RSTB | 外部复位引脚 |
| 11 | VDDPST | 数字和IO电源1.8~3.3V | 22 | SDIO_DATA0 | GPIO7，SD_MISO | | | |